Mid-Century ALASKA

United States Department of the Interior

OFFICE OF TERRITORIES

Anne Philo
from
Celia Thaxter
to Lady Franklin
Alaska

Mid-Century

ALASKA

UNITED STATES DEPARTMENT OF THE INTERIOR

OFFICE OF TERRITORIES

United States Department of the Interior

FRED A. SEATON, Secretary

Office of Territories

ANTHONY T. LAUSI, Director

United States
Government Printing Office
Washington : 1957

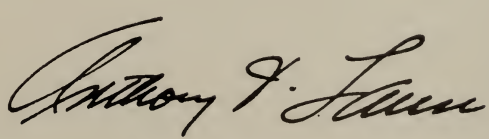
For sale by the Superintendent of Documents
U. S. Government Printing Office, Washington 25, D. C.
Price $1

Foreword

FROM THE TIME ALASKA was purchased from Russia in 1867 for $7,200,000, the general public has indulged in generalized thinking about it. Alaska was "Seward's Folly." It was "a land of perpetual ice and snow—a frigid and forbidding outpost where only Eskimos could survive," and for a few years at the turn of the century it was "gold."

It was not until the end of World War II that interest in this vast Territory was greatly stimulated and the public became aware of its economic and strategic importance. This interest is mounting steadily. People are learning that Alaska is a rich land with hundreds of thousands of potential agricultural acres, enormous timber stands, great quantities of minerals, superabundant undeveloped water power, unrivaled salmon fisheries, immense game and fur resources, and magnificent scenery. Alaska is as exciting and challenging as the interior of the United States must have been to the pioneers who pushed across the Alleghenies.

However, despite Alaska's strategic importance and the progress which has been made in its development, many people know surprisingly little about this great country and the opportunities to be found there. This book is designed to dispel the misconceptions, to offer background material and to serve as a source of reference to aid the student, the prospective settler, and the potential investor. It attempts to give a true picture of Alaska and its potentialities. Those wishing to pursue studies of the Territory can obtain additional data from the sources named in the text.



DIRECTOR, *Office of Territories*

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Alaska

ALASKA is one-fifth the size of the continental United States; a land with half a million square miles of unbelievably rich country—rich in varied resources—and inhabited by comparatively few people. A part of the United States, it is American in language, customs, and politics.

Alaska offers opportunities—opportunities for homesteaders, businessmen, professional people, and workmen. More and more people each year are making their permanent homes in the Territory, investing their capital, and taking part in the development of the country's natural resources. These resources, many of which are becoming scarce in more industrialized areas, need to be developed to a greater extent. Millions of new citizens are sought to aid in developing Alaska's forest, oil, and mineral resources; to fabricate timber, furs, and nonmetallic minerals; to cultivate lands; to build roads, airports, and homes; to develop hydroelectric power potentialities; and to build a tourist industry. The Territory's development is moving forward, but much remains to be done. We need Alaska—it is vital to our national defense—and we need its wealth of natural resources. This great country should continue to exemplify the American idea already set forth in every State of the Union by our unprecedented march across the continent.

Alaska's Surface Features

Alaska is the largest peninsula of the North American continent. Surrounded on three sides by water, it is connected with Canada by a land base 600 miles wide along the 141st meridian between the Arctic and Pacific Oceans. Southeastern Alaska is not a part of this peninsula,

MAP SHOWING THE RELATIVE SIZE OF ALASKA AND THE UNITED STATES.

but is, geographically, the coastal section of northern British Columbia.

Alaska is approximately 586,400 square miles (375,296,000 acres) in area, including rivers, lakes, etc., or one-fifth the size of the United States. The actual land area is 571,000 square miles.

One of the great rivers of North America is the Yukon, which rises in British Columbia, flows through part of the Yukon Territory and traverses the entire width of Alaska. Second in size to the Yukon is the Kuskokwim, which rises on the western slope of the Alaska Range and drains the southwestern portion of the central region. Both rivers empty into the Bering Sea.

Several large rivers, the Unuk, Stikine, Taku, and Alsek, also rise in Canada and flow through Alaska into the Pacific. The Copper, Matanuska, and Susitna Rivers flow into the North Pacific Ocean.

The Kobuk, Noatak, and Colville Rivers are the principal streams emptying into Arctic waters.

Physiographically, Alaska may be divided into three distinct major regions, varying in geologic origin and surface expression. The three sections are the Pacific Mountain, Central Plateau, and Arctic Slope regions.

Pacific Mountain Region

The Pacific Mountain region includes southeastern, south-central, and southwestern Alaska. Geologically it is a continuation of the continental Pacific Mountain system which can be traced through British

Columbia into Alaska. At this point, the axis changes and sends two spurs in a southwesterly direction. One spur forms the Chugach and Kenai Mountains and reappears in Kodiak Island. The main spur forms the crescent of the Alaska Range and stretches over the Alaska Peninsula into the Aleutian Islands. The valleys between and within these parallel ranges are filled by the sea or form broad valleys and intermittent basins, such as Matanuska Valley and the Copper River Basin.

The southeastern coastal strip, consisting of many islands and a strip of narrow mainland, is sometimes called the Panhandle. It is separated from Canada by mountains that rise sharply from the water's edge to heights of 9,000 feet, or more, through which run deep fiords—sea inlets with high mountain walls. This region has many glaciers and extensive spruce, hemlock, and cedar forests. Juneau, the capital city; Sitka, formerly the Russian capital; and Ketchikan, the largest salmon packing center in the world, are in this section. One of the world's great

MOUNT McKINLEY AS SEEN FROM WONDER LAKE.

mines, the Alaska-Juneau Gold Mine, now inactive, is in Juneau. Other important towns are Wrangell, Petersburg, Skagway, and Haines. Haines is an important seaport town which has direct access to interior Alaska by motor road.

The south-central coastline resembles the southeast. North and parallel to the coast extends the 150-mile-wide Alaska Range. Numerous mineral deposits exist in this range and many of the mountains are more than 15,000 feet high—Mount McKinley is 20,269 feet. Two great routes to the interior, The Alaska Railroad from Seward and Whittier through Anchorage to Fairbanks and the Richardson Highway from Valdez to Fairbanks, are in this section.

In the southwestern section for hundreds of miles along the long narrow Alaska Peninsula and the chain of Aleutian Islands are volcanoes, glaciers, and slopes with moss, grass, and bush. Trees are nonexistent. The principal settlements are Kodiak Island and Unalaska Island. Kodiak Island is the home of the Kodiak bear (great Alaskan brown bear), largest carnivorous animal. Pribilof Islands, about 200 miles north of Unalaska, are the breeding grounds of the Alaska fur seal. The Aleutians are like a chain of stepping stones leading westward toward the Komandorski Islands and the Kamchatka Peninsula of Soviet Russian Siberia. This peculiar configuration gives Alaska an unusually wide spread in longitude and latitude, between the paralells of 51° and 72° North, and between the meridians of 130° West and 173° East. Bristol Bay, a great salmon-fishing area, is in this region. The lower reaches of the Yukon and Kuskokwim Rivers are rich in fur and contain deposits of gold, platinum, antimony, and other minerals, only a few of which have been worked since World War II. Much of the inland region is wild and little explored. The largest communities are Bethel, Dillingham, and Naknek.

Central Plateau Region

North of the crescent formed by the Alaska Range lies a broad expanse of plateaus and lowlands, dotted here and there by mountain groups and drained by several large rivers, including the Yukon, Kuskokwim, Porcupine, Tanana, and Koyukuk. These rivers and other streams flow in wide valleys choked with sedimentation brought down from the higher lands north and south of the plateau region. This central plateau continues east into the Yukon Territory and west to the Bering Sea. The subsoil over most of this area is frozen the entire year, but some of the thawed top soil is relatively fertile. Tundra and wooded areas contain fur animals, game birds, and large numbers of big game—moose, caribou, mountain sheep, and black bear. Fairbanks, principal town of the interior, is the center of the gold placer mining industry and has a number of potential lode gold producers.

The Seward Peninsula is a major gold-mining area. Nome, the principal town, was the scene of the gold rush of the early 1900's. In winter, when the sea is frozen, the inhabitants rely for transportation on dogteams, planes, and tractors.

Bering Strait, which separates Alaska from Siberia, is the channel between the Bering Sea and the Arctic Ocean. The Strait is 50 miles wide. Big Diomede Island in the Strait is part of the Soviet Union, but Little Diomede Island, 2.4 miles east, is part of the United States.

Arctic Slope Region

The land sloping gradually from the northern foothills of the Brooks Range, which extends east-west over the northern part of Alaska, to the Arctic Ocean constitutes the Arctic Slope. Some of the mountains are separated by wide valleys, but in places the range is extremely rugged. A number of mountain groups are in the area—the DeLong, Schwatka, Endicott, Baird, and Davidson Mountains. Tundra country, consisting of large areas of rolling uplands and coastal plains, stretches northward from the Brooks Range. The principal settlements along the Arctic coast are the villages of Kotzebue, Wainwright, and Barrow. Most of the inhabitants of these villages are Eskimos.

Time

Because of Alaska's high northern latitude, the length of day varies much more between summer and winter than in the United States. At the Arctic Circle on the shortest day of the year the sun touches the southern horizon at noon, then drops from sight again. Below the Arctic Circle the sun rises a correspondingly longer time, but farther north it stays below the rim of the horizon on this day. For instance, on December 21 at Fairbanks, about 2.5 degrees south of the circle the sun rises at 9:58 a. m. and sets at 1:40 p. m. At Barrow, about 4 degrees north of the circle, the sun is not seen from late November until late January.

In summer the length of the days is the reverse of the winter. At the Arctic Circle on the longest day the sun dips to the horizon at midnight, then rises. Farther south the sun goes below the horizon, while above the Arctic Circle the sun circles the sky, never setting. At Fairbanks on June 21 the sun rises at 12:57 a. m. and sets at 11:48 p. m. At Barrow the sun does not go below the northern horizon from early May but circles the sky, and is highest in the south at noon and lowest in the north at "midnight." The sun first sets at Barrow early in August. Thus, Alaska is as much a "land of the midnight sun" as northern Norway.

Alaska time, by an act of Congress in 1918, was fixed as that of 150° meridian west, 10 hours later than Greenwich. Actually, however, four times are used, and time belts in Alaska are indicated by degrees of longitude. Fifteen degrees are equivalent to one hour of time.

120° or Pacific Standard Time (Ketchikan to Juneau)
135° or Yukon Standard Time (Yakutat and Skagway)
150° or Alaska Standard Time (Anchorage and Fairbanks)
165° or Bering Standard Time (Nome)

Note: All southeastern Alaska towns (north to and including Juneau) are now unofficially using Pacific Standard Time as a matter of convenience in order to be on the same time as Seattle.

When it is 9:00 a. m. at Seattle, Washington, it is:

9:00 a. m. at Ketchikan and Juneau
8:00 a. m. Yakutat and Skagway
7:00 a. m. at Cordova, Valdez, Seward, Anchorage and Fairbanks
6:00 a. m. at Nome

The 180th Meridian lies between the Andreanof and the Rat Islands, among the Aleutian Group. This is the Meridian farthest west of Greenwich and is designated the International Date Line. As a matter of convenience, the International Date Line jogs west to include Attu, the westernmost Island in the Aleutians (in Bering Time zone), and east to include Siberia and the Big Diomede (Russian Territory in the next time zone).

A traveler making a trip over the Alaska Highway to Alaska will traverse several time zones—four if his trip goes through Edmonton, Alberta, such as:

Edmonton starts with (1) Mountain Standard Time (Alberta), (2) Pacific Standard Time (British Columbia), (3) Yukon Standard Time (Yukon Territory), and (4) Alaska Standard Time (Alaska) with a difference of one hour in each zone (All based on standard time).

Climate

Alaska is not a frozen wasteland as many people believe. The southeastern area has the same average temperature as that of Baltimore and Philadelphia, the western area climatically is similar to New England, and the interior is comparable to Montana and the Dakotas. It is notable that Barrow, on the Arctic Ocean coast, has a higher winter temperature record than Fairbanks, 120 miles below the Arctic Circle.

Alaska's proximity to the North Pole is about that of Scotland, Norway, Finland, and Sweden.

Specifically, the southeastern area has mild winters, cool summers, with heavy precipitation. The south-central area has moderate winters, warm summers, with heavy precipitation on the coast and light rain and snow inland. Along the Alaska Peninsula and Aleutian Islands, the winters are stormy but not exceptionally cold, the summers are cool with considerable rain and fog. Interior Alaska has very light rainfall and great extremes in winter and summer temperatures.

More rivers and harbors subject to freezing exist in the States than from the Aleutians to southeastern Alaska. With the exception of Cook Inlet, which is little used for navigation because of high tides, Alaska has no freeze-ups east and south of Bristol Bay owing to the warm ocean currents and warm winds traveling eastward from the Asiatic coast.

Precipitation is heavy in some sections, exceeding that of many areas of the States. This is an advantage in southeastern Alaska as the rain encourages the dense forest growth of Tongass National Forest and feeds the thousands of streams in which the salmon spawn every year. At the same time, it provides the vast, unharnessed waterpower which will enable private capital to open pulp and paper mills and utilize the great forest resources. Average annual precipitation of 150 inches in the southeastern region quickly drops to 15 inches or less north of the Alaska Range and steadily decreases to 5 inches on the Arctic coast. A climatic summary prepared by the United States Weather Bureau follows on pages 8 and 9.

People and Population

While it is true that Alaska needs people—people with initiative and ability—it also is true that many residents of the north country have lived there a long time. Many of the men and women who went there before, during, and after the fabulous gold rush of 1898 and 1901 still live in the Territory. Like residents of long standing in any pioneer or new community, they have acquired, through the years, dignity, wisdom, tolerance, and friendliness and have made substantial places for themselves in a society which is as stable as any in continental United States. Their business and professional acumen is as efficient and productive as that of people engaged in similar activities in any country of the world.

The four major cities, Anchorage, Fairbanks, Ketchikan, and Juneau attract a large portion of the population, but interest is increasing noticeably in other points of south-central and interior Alaska.

ALASKA

Climatic summary

District	Station	Temperature					Killing frost average dates				Average precipitation														
		Length of record	January average	July average	Maximum	Minimum	Length of record	Last in spring	First in fall	Growing season[1]	Length of record	January	February	March	April	May	June	July	August	September	October	November	December	Annual
		Yr.	° *F.*	° *F.*	° *F.*	° *F.*	*Yr.*			*Days*	*Yr.*	*In.*	*In.*	*In.*	*In.*	*In.*	*In.*	*In.*	*In.*	*In.*	*In.*	*In.*	*In.*	*In.*
Southeastern	Annex Creek	21	22.7	54.9	84	−12	20	May 6	Sept. 30	147	22	9.04	7.85	6.20	5.65	5.14	4.33	6.21	10.22	13.42	16.61	13.41	9.36	107.44
	Bell Island	9	29.0	58.2	90	−4	9	May 8	Oct. 28	173	9	10.63	8.51	7.12	6.64	5.33	5.49	5.71	7.19	11.26	15.29	15.11	11.78	110.06
	Haines	15	22.9	57.6	90	−15	14	May 20	Sept. 19	122	15	5.42	5.14	4.76	3.34	2.01	1.58	1.80	2.27	4.98	10.24	7.74	7.15	56.43
	Juneau	40	27.5	56.6	89	−15	23	Apr. 28	Oct. 17	172	40	7.18	5.63	5.41	5.46	5.22	3.95	5.03	7.33	10.15	11.18	9.10	7.61	83.25
	Kassan										13	9.21	7.59	6.32	6.22	5.65	3.76	3.68	4.44	6.30	10.17	10.39	10.27	84.00
	Ketchikan	28	32.6	57.5	96	−8	23	May 5	Oct. 17	165	28	13.71	11.63	12.20	10.79	8.31	6.55	8.24	11.51	12.14	20.13	19.74	15.94	150.89
	Petersburg	8	28.5	55.2	81	−5	6	May 18	Sept. 24	129	9	8.50	9.85	7.29	6.39	5.79	4.49	5.31	6.94	11.97	15.32	12.79	11.81	106.45
	Seclusion Harbor	6	30.3	55.8	92	−2	6	May 6	Oct. 9	156	6	11.89	9.08	8.20	6.68	5.49	4.14	4.70	6.67	8.52	17.45	15.40	12.33	110.55
	Sitka	40	32.4	54.9	87	−5	23	May 10	Oct. 16	159	40	7.84	6.78	5.97	5.58	4.15	3.36	4.29	7.02	10.33	12.64	10.07	9.10	87.13
	Skagway	32	21.1	57.7	92	−19	21	May 27	Sept. 15	111	30	2.05	1.40	1.30	1.46	.89	.92	1.45	1.91	3.52	5.02	4.14	2.79	26.85
	Tree Point	9	34.1	54.4	86	−3	8	May 22	Sept. 23	124	9	10.85	7.23	6.97	6.47	5.46	5.66	5.72	5.41	8.38	12.69	13.45	11.38	99.67
	View Cove	7	35.1	56.0	88	5	6	Apr. 25	Nov. 3	192	7	17.74	12.17	12.36	10.97	9.50	6.65	6.20	7.23	12.58	18.37	22.57	19.18	155.52
	Wrangell	23	29.0	58.2	92	−6	19	Apr. 26	Oct. 12	169	22	7.71	7.25	5.43	4.89	4.38	3.55	4.49	5.31	8.35	11.21	11.79	8.59	82.95
Pacific coast	Cordova	26	27.2	54.8	87	−19	22	May 8	Oct. 4	149	27	9.49	10.70	8.49	8.69	9.09	6.03	8.51	13.24	19.96	22.94	15.51	12.78	145.43
	Kodiak	36	29.8	54.3	85	−12	23	May 5	Oct. 12	160	40	4.66	4.73	3.83	3.93	6.03	4.91	3.60	5.00	5.43	7.55	5.72	6.09	61.48
	Seward	26	22.4	55.3	82	−20	18	May 18	Sept. 27	132	26	4.46	4.91	3.34	4.25	3.39	2.42	2.83	5.92	9.60	11.06	14.85	6.70	73.73
	Valdez	27	19.1	53.3	83	−24	20	May 23	Sept. 16	116	25	4.55	4.92	4.22	2.90	2.81	2.15	3.53	6.18	9.05	8.38	5.99	5.70	60.38
	Whale Island	14	28.8	53.1	83	−9	14	June 3	Sept. 17	106	15	3.87	4.62	2.84	3.52	6.88	4.22	3.16	3.46	3.66	7.43	5.75	4.62	54.03
	Yukutat	17	29.3	52.8	82	5	12	May 9	Oct. 8	152	18	10.77	9.67	8.75	7.80	7.84	4.17	8.18	10.17	14.65	17.73	16.92	12.48	129.13
Southwestern	Atka	12	33.4	49.6							13	6.53	4.43	5.54	5.19	5.13	3.98	5.55	5.41	6.52	7.70	8.26	6.00	70.24
	Dutch Harbor	22	32.2	51.3	80	8	22	May 22	Oct. 14	145	18	5.80	5.24	5.01	4.02	4.41	2.74	1.92	2.35	5.21	7.33	5.71	7.03	56.77
	St. Paul Island	27	25.2	45.8	64	−26	23	June 5	Oct. 10	127	36	2.26	1.61	1.87	1.36	1.52	1.39	2.73	3.25	3.47	3.32	2.94	2.22	27.94
Southern Valley	Anchorage	22	11.2	57.0	92	−36	23	May 25	Sept. 12	110	22	.85	.69	.57	.39	.48	.58	1.65	2.64	2.49	2.08	1.06	.84	14.32
	Bethel	15	8.3	54.5	90	−46	15	June 4	Sept. 5	93	15	1.10	.66	.87	.53	.69	1.15	2.32	3.97	3.30	1.69	.86	.84	17.98
	Kennecott	24	4.5	52.4	80	−39	23	June 6	do	91	20	1.71	1.48	1.08	.65	1.16	1.46	2.39	3.03	3.07	2.15	1.84	1.58	21.60
	Matanuska	19	12.6	57.7	91	−36					19	.94	.80	.61	.47	.62	1.06	1.87	2.88	2.39	1.84	1.05	1.08	15.61
	Susitna	6	9.1	57.7	86	−37					6	1.74	.86	1.00	.94	1.25	1.88	2.38	4.88	4.10	4.07	2.35	1.43	26.88
	Talkeetna	19	7.6	58.0	90	−48	15	June 14	Aug. 25	72	18	1.81	1.98	1.97	.90	.96	1.65	3.64	5.13	4.40	4.02	1.87	1.70	30.03
Bering Sea	Dillingham (near)	22	16.1	55.6	89	−41					21	1.87	1.34	1.78	1.29	1.63	1.70	2.71	3.91	3.93	2.78	1.73	1.45	26.12
	Nome	32	3.4	49.8	84	−47	21	June 19	Aug. 10	52	32	1.16	.83	.88	.64	.66	1.21	2.55	3.36	2.77	1.61	1.00	1.15	17.82
	Teller	6	−.1	52.1	76	−35					6	1.46	.60	.31	.79	.46	.71	1.80	1.47	2.01	.53	.83	.42	11.39
	White Mountain	16	2.7	54.1	89	−55	15	June 9	Aug. 24	76	14	.97	.68	.67	.27	.29	.98	2.10	2.84	3.45	.82	.69	.90	14.66

Yukon Valley	Allakaket	24	−20.3	57.7	90−70	14	June 13	Aug. 6	54	25	.77	.84	.70	.36	.65	1.32	2.11	2.62	1.55	1.11	.83	.84	13.10
	Dawson	37	−21.0	59.3	92−66					37	.87	.70	.52	.52	1.02	1.19	1.55	1.58	1.41	1.17	.12	1.04	12.69
	Fairbanks	34	−11.6	60.0	99−66	20	May 29	Aug. 26	89	34	.97	.49	.70	.29	.57	1.30	1.92	2.10	1.31	.85	.74	.63	11.87
	Fort Yukon	23	−21.6	61.2	100−78	18	June 1	Aug. 21	81	23	.40	.41	.26	.27	.49	.80	1.07	1.27	.65	.60	.35	.31	6.88
	Holy Cross	35	−.4	56.5	93−58	22	May 31	Aug. 29	90	29	1.49	.97	1.29	.66	.67	1.31	2.70	3.78	2.91	1.67	1.29	1.32	20.06
	Hot Springs	9	−11.1	58.3	88−70					9	1.64	.99	.37	.12	.25	1.46	3.41	4.30	1.64	.91	.85	.74	16.69
	McKinley Park	16	1.9	54.3	89−54	15	June 9	Aug. 11	63	15	.83	.78	.41	.60	.96	2.09	2.38	3.13	1.68	1.10	.70	.62	15.28
	Nulato	13	−7.5	57.5	90−62					13	1.40	.96	1.26	.38	.58	.83	2.41	2.64	2.10	1.87	1.21	.86	16.50
	Ruby	6	−7.5	57.5	98−52					6	1.78	.99	.82	.31	.79	.71	3.06	3.82	2.77	1.06	.83	.83	17.77
	Tanana	37	−12.5	58.3	91−76	21	June 3	Aug. 26	64	38	.80	.74	.64	.25	.76	1.21	2.37	2.60	1.80	1.07	.75	.64	13.63
	University Experiment Station	34	−10.2	59.9	99−65					34	.93	.45	.73	.28	.57	1.32	1.85	2.14	1.37	.86	.79	.56	11.76
Arctic drainage	Barrow	25	−17.0	40.2	78−56	18	July 4	July 21	17	23	.15	.20	.14	.13	.15	.26	.93	.74	.46	.59	.32	.27	4.34
	Kotzebue	14	−9.2	52.4	81−58	10	June 13	Sept. 14	93	6	.94	.24	.26	.50	.09	.57	1.05	.89	.73	.37	.36	.32	6.32

[1] Length of growing season between average dates of last killing frost in spring and first in fall.

Precipitation—Territorial Unit Values

[This tabulation gives the mean annual precipitation, 1907–55, for the southern and northern divisions of Alaska separately. The southern division consists of the southeastern, Pacific coast, and southwestern island districts; the northern division consists of the remainder of the Territory]

Precipitation for southern division		Precipitation for southern division		Precipitation for southern division		Precipitation for northern division		Precipitation for northern division		Precipitation for northern division	
Year	Mean	Year	Mean	Year	Mean	Year	Mean	Year	Mean	Year	Mean
	In.		*In.*		*In.*		*In.*		*In.*		*In*
1907	65.41	1924	91.33	1941	80.58	1907	13.59	1924	17.17	1941	13.55
1908	68.01	1925	85.62	1942	91.28	1908	10.96	1925	17.24	1942	16.67
1909	63.87	1926	104.46	1943	114.56	1909	10.15	1926	13.11	1943	18.27
1910	67.87	1927	83.49	1944	93.71	1910	9.61	1927	12.90	1944	19.41
1911	67.71	1928	98.09	1945	92.58	1911	11.22	1928	16.95	1945	18.82
1912	93.68	1929	93.54	1946	79.90	1912	12.35	1929	19.35	1946	15.70
1913	84.58	1930	92.91	1947	95.19	1913	9.83	1930	18.44	1947	13.48
1914	78.53	1931	85.82	1948	87.86	1914	12.20	1931	15.21	1948	14.93
1915	100.96	1932	79.54	1949	89.43	1915	16.31	1932	15.74	1949	15.36
1916	84.74	1933	73.01	1950	66.41	1916	16.23	1933	11.07	1950	12.27
1917	105.18	1934	81.78	1951	69.23	1917	13.95	1934	15.43	1951	15.54
1918	96.79	1935	87.84	1952	84.16	1918	15.58	1935	17.77	1952	13.90
1919	80.78	1936	91.97	1953	80.23	1919	15.70	1936	14.86	1953	12.80
1920	81.69	1937	88.83	1954	66.79	1920	15.68	1937	16.45	1954	14.99
1921	83.23	1938	102.75	1955	76.70	1921	14.23	1938	17.04	1955	18.03
1922	82.26	1939	112.77			1922	17.14	1939	15.74		
1923	91.29	1940	89.29			1923	14.96	1940	13.96		

Chart prepared by the U. S. Weather Bureau.

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Citizens of Alaska are citizens of the United States. They receive most of the privileges and, of course, are subject to the duties and obligations of citizenship, including service in the armed forces and payment of Federal income taxes. People of Alaska have the right to vote for their own legislators and various Territorial officials, but they do not participate in Presidential elections because Alaska does not have votes in the electoral college.

Many Alaskans are aborigines—Eskimos, Aleuts (pronounced Alley-oots), and Indians. Eskimos live in the north and northwest; Aleuts in the southwest; and Indians, Tlingit (pronounced Klink-et), Tsimshian, and Haida, in southeastern Alaska. Athapascan Indians live in interior and south-central Alaska. A few of these people have retained their tribal traditions, but in most cases they have adopted modern ideas and living conditions and are awake to new opportunities. They serve in the Territorial Legislature and other government offices, the unions, and the Chambers of Commerce and other organizations. They also hold responsible positions in mining, fishing, transportation, and other industries. In keeping with progressive educational and governmental ideals, equal opportunities exist in Alaska for all members of society.

Eskimos

Among the native people the most numerous is the Eskimo. They live along the Arctic Ocean and Bering Sea and in the deltas of the Yukon and Kuskokwim Rivers. More than other natives, Eskimos have preserved their ancient customs, habits, and language. They are fur trappers and fishermen. They also engage in ivory carving and mining. In the early days, Eskimos lived chiefly on meat and fish, supplemented by a variety of native berries, edible plants (greens), and a few tuberous roots. Today, they have become accustomed to a modern diet.

During World War II many Eskimos served in the Army or Navy. Others worked on airfields or supplied meat to the armed forces. Eskimo women and children sewed winter clothing for soldiers and sailors and many Eskimo villages subscribed heavily to war bonds.

Aleuts

The Aleuts live in the Aleutian Islands, the Pribilofs, along the Alaska Peninsula, and on Kodiak Island. Over 500 resident Aleuts live on the Pribilof Islands and work in the government-administered sealing operations. They are closely related to the Eskimos, although there has been much interbreeding between these people and the whites, dating back to their first encounter with Russians. Aleuts are able seamen and clever fishermen. They have their own language and re-

tain in part their traditions. An Aleut has deep respect for his religion, his graves, and the church in which he worships. His knowledge of local geography is reliable.

Indians

Approximately half of Alaska's Indians are Tlingits, a great race living on the islands and the broken coast of southeastern Alaska. The Tlingit country is noted for its tall, gaily-painted totem poles.

To a Tlingit, trees are friends. Throughout his history he has depended on them for his canoes, beams and rafters, the boxes which contain his family treasures, ceremonial hats and dancing masks, drums, shields and weapons, and totem poles. When the white man came, the Tlingits battled fiercely for their ancestral forests.

Although modern Tlingits have lost many of their former ways of living, they are still a fishing people. Many of them own and operate their own fishing boats, others work in southeastern canneries during the summer, supplementing such income with trapping and hunting in the fall and winter. Others carry on the traditions of their people by carving and woodworking. The famous Chilkat blankets, made of cedar bark and mountain goat wool, are woven by Tlingits.

In the past, Tlingit people never remained rich for long. When one of them saved a number of blankets, which were used for money, he held a great feast, called a potlatch, at which he gave everything away. The more he beggared himself, the more honor he received. In reality, this was his manner of attaining social security—for those who had received gifts from him were obligated to assist him in time of future need. This custom is almost extinct today, but the Tlingits continue to be good business people and occupy positions of importance in the economy and development of Alaska.

The Tsimshian Indians came from British Columbia, led by William Duncan, a missionary. They settled on Annette Island in southeastern Alaska in 1887. Most of them live in their model village of Metlakatla, which is run partially on a cooperative basis. Among the cooperative enterprises are a salmon cannery, including several fish traps; a water system; a community hall; an electric plant; and a sawmill. The individuals own their own fishing boats and operate the stores in the village. Two churches are in the village.

The Haida Indians came several generations ago from British Columbia to southeastern Alaska. They settled in the southern part of Prince of Wales Island where they built their wooden villages on beaches just above the high-water mark. Relatives of the Tlingits, they also carved totems, were grouped in clans, gave potlatches, and lived by fishing and hunting. They are noted for their fine slate carvings and the precise and delicate adornment of articles of wood, bone,

and shell. Their mode of living now is much the same as the Tlingits with fishing and related enterprises contributing the major portion of their income.

The Athapascan Indians are thinly scattered in interior and south-central Alaska. Most of them are poor and their villages are small. They live largely by fishing and trapping and are clever at making many useful and ornamental objects.

POPULATION

The population counts of Alaska made in 1880 and 1890, following purchase by the United States, largely were based upon estimates furnished by traders and missionaries. The census completed in 1930 showed a count of 59,278.

In 1940 the population of Alaska was 72,524 and on April 1, 1950, the count was 128,643. The 1940–50 increase represents the greatest population growth rate in Alaska for any decade since the 1890–1900 gold rush decade. Final figures for the 1950 census are available from the Bureau of the Census. Following are the 1950 population figures for some of the localities and districts:

Anchorage	11,254	Mount McKinley district	343
Anchorage district	32,060	Nenana	242
Bethel district	3,895	Nenana district	846
Circle district	680	Nome	1,876
Cordova	1,165	Nulato district	1,332
Craig	374	Palmer	890
Eagle	55	Pelican City	180
Fairbanks	5,771	Petersburg	1,619
Fairbanks district	19,409	Petersburg district	2,310
Haines	338	Port Alexander City	22
Haines district	645	Seldovia	437
Hoonah	563	Seldovia district	701
Hydaburg	353	Seward	2,114
Juneau	5,956	Sitka	1,985
Juneau district	8,758	Skagway	758
Ketchikan	5,305	Unalaska	173
Ketchikan district	9,455	Valdez	554
Klawock	404	Wasilla district	585
Kodiak	1,710	Whittier district	629
Kodiak district	6,264	Wrangell	1,263
Koyukuk district	206	Yakutat	298

According to the Bureau of the Census, the estimated civilian population figure for Alaska as of July 1, 1956, was 161,000.

History and Government

Russian Period

Alaska's written history begins in Russia during the reign of Peter the Great. Czar Peter, the first Russian ruler to "open a window on Europe," commissioned Vitus Bering, a Danish sea captain in his service, to explore the northwest coast of the American continent. In 1728, Bering sailed far enough north, through what is now called Bering Strait, to establish the fact that this land was part of the North American continent. In 1741, at the age of 60, Bering returned on the *St. Peter* and made a landing off south-central Alaska. His lieutenant, Alexei Chirikof, in command of the *St. Paul,* sailed along the southeastern coast and lost a landing party to hostile natives near Sitka.

Russia based her claim to the ownership of northwestern North America upon these voyages of Vitus Bering and soon after his second expedition, Russian fur traders advanced along the Aleutians, depleting the country of furs, practically exterminating the sea otter, enslaving the Aleuts, and making war on the Indians. Their activities aroused the interest of other nations, leading to Spanish expeditions in 1774 and 1775 along the southeastern coast, and in 1778, Captain James Cook, the English explorer, made extensive surveys for the British Government.

The first settlement was made by the Russians at Three Saints on Kodiak Island in 1784. In 1799, the Russian-American Company, a Russian trading corporation, took absolute domination over everything in Russian-America under a 20-year concession which was renewed periodically. Alexander Baranof was manager of the Company for approximately 20 years. In 1806, he moved the capital from Kodiak to Sitka and for years Sitka was the most cosmopolitan town west of the Mississippi and north of Mexico City.

The progress of the Russians can be traced today by the remaining Russian Orthodox churches, wooden-framed and turnip-topped, built by the faithful Aleuts and Indians under the missionary priests. These monuments to Russian expansion are found at Unalaska, eastward along the Aleutians, in the Kodiak-Afognak group, and at Sitka—last capital of Russian-America.

American Colonization Period

In 1855, during the Crimean War when it was feared that the British might seize the country, Russia tried to sell this part of North America to the United States, but the transaction was not made until later when Secretary of State William H. Seward urged the United States Congress to purchase the area. On March 30, 1867, at 4 a. m. the treaty was signed by Baron Edouard de Stoeckl for Russia and Secretary Seward for the United States. The Senate of the United States in special session consented to ratification of the treaty on April 9, 1867, and President Andrew Johnson ratified it on May 28. Russia had ratified the treaty on May 15 and it was proclaimed by the President on June 20, 1867. The formal transfer occurred at Sitka on October 18, 1867, at 3:30 p. m. Major General L. H. Rousseau served as the United States Commissioner for the transfer. Captain Alexei Pestchouroff served as Commissioner for the transfer on behalf of Russia. By the Act of July 27, 1868, (15 Stat. 198), the Congress appropriated $7,200,000 for the purchase of the Territory.

When Alaska was purchased from Russia, little thought was given to the wealth of the land itself. There was no effort to develop the country and from 1867 to 1884 it was almost completely neglected. The United States Army was in charge for the first decade, but its jurisdiction was withdrawn in 1877. From 1877 to 1879, the Treasury Department administered Alaskan affairs through a Deputy Collector of Customs, and in turn was succeeded by the Navy Department which had charge of administration until the Congress, by act of May 17, 1884, provided for the appointment of a governor and the organization of a government in the District of Alaska with a temporary capital located at Sitka. Under this act the Secretary of the Interior was specifically empowered to regulate the enforcement, in the Territory,

of United States laws relating to mining claims and to provide for the education of children. He was also directed to select two officers who together with the governor should constitute a commission to examine and report upon the condition of Indians residing in said Territory. The act of July 24, 1897, provided for the appointment of a surveyor general for the District of Alaska, and by the act of May 14, 1898, the homestead laws were extended to the Territory and provisions were made for rights-of-way for railroads.

The discovery of gold on the Klondike in the Canadian Yukon in the late 1890's caused the famous gold rush and stampede to the Territory, making government activities inadequate, but the act of June 6, 1900, greatly extended and defined the organization of the government and the courts.

The Act of June 6, 1900, provided that "Alaska shall constitute a civil and judicial district" and that "the temporary seat of government of said district is hereby established at Juneau: Provided, That the seat of government shall remain at Sitka until suitable grounds and buildings thereon shall be obtained by purchase or otherwise at Juneau."

The principal departments of government at that time were the governor's office, the surveyor-general's office, the customs office and the district court and marshal's office.

Because of the greater amount of litigation at Juneau, the District Court had for some years prior to 1900 held more sessions in Juneau

SITKA, ALASKA.

than in Sitka. The courthouse at Juneau had burned in 1898, however, and was not rebuilt until 1904. The court did not officially move to Juneau until 1904.

There seems to be no official date for the opening of the governor's office in Juneau, but the move took place in September 1906. When Hoggatt was appointed governor in 1906 he moved the office to Juneau and set it up in an abandoned mission building. It caught fire a few days later and destroyed a good many of the files of the office. The office was then moved into rented quarters where it remained until the present Federal building was completed in 1931.

Under an act of May 7, 1906, Alaska was empowered to elect a Delegate to Congress, and by the Organic Act of August 24, 1912, the incorporated Territory of Alaska was created, and a bicameral legislature was established to convene biennially for 60 days at the capital, which was fixed at Juneau. The first Territorial Legislature met in 1913.

GOVERNMENT

Alaska's Government is part local and part Federal in character. The Federal Government is represented in Alaska by the Governor, who is appointed by the President of the United States, with the consent of the United States Senate, for a term of 4 years. The Secretary of Alaska, also appointed by the President for a term of 4 years, is designated as Acting Governor with full powers during the absence of the Governor or in case of a vacancy in that office.

The Territorial Government has Executive and Legislative branches. The executive power of the Territory is vested in the Governor who may veto any bill passed by the Territorial Legislature within three days after it is presented to him. If not so vetoed while the Legislature is in session, a bill becomes law without the Governor's approval. The Legislature may override the veto by a two-thirds vote of each house. The U. S. Congress has the authority to declare any law enacted by the Legislature to be null and of no effect. This authority, however, has never been exercised.

The legislative power is vested in the Territorial Legislature consisting of a Senate and a House of Representatives. There are 16 members in the Senate; 24 in the House.

Alaska has no county form of government. The Territory is divided into four judicial divisions representing divisions of the United States District Court for Alaska. However, they are also used as a basis for election to the Territorial Legislature. Four senators are chosen from each judicial division; the 24 representatives are apportioned among the divisions in accordance with the population. The term of each member of the Senate is 4 years, two members from each division

being elected every 2 years. The term of each member of the House is 2 years. The Legislature meets in regular session for 60 days every odd-numbered year, convening in Juneau on the fourth Monday in January. The Governor is empowered to call extraordinary sessions, not to exceed 30 days in duration, in cases of emergency.

Territorial elections are held biennially in October in even-numbered years. Alaska elects a delegate to the United States Congress every 2 years. He represents the Territory, is a member of a number of committees in the House of Representatives, introduces legislation, can speak on the floor, but has no vote.

The political parties of Alaska send delegates to the National conventions at which the candidates for President and Vice President of the United States are nominated, but Alaska has no votes in the electoral college, so the people cannot participate in Presidential elections.

The Alaska judiciary is Federal, vested in the District Court of the United States for the District of Alaska and in Commissioners' courts. The District Court is divided into four divisions, each presided over by a judge appointed by the President, by and with the advice and consent of the United States Senate, for a term of 4 years. The District Courts have the same general original jurisdiction as United States District Courts and, in addition, general jurisdiction in civil, criminal, equity and admiralty cases arising from Federal law and handle appropriate Territorial matters as well. The commissioners' courts are located in convenient precincts designated in each judicial division by the United States judges. They are presided over by United States commissioners, appointed by the district judges. The commissioners act as coroners, are ex officio justices of the peace, recorders and probate judges. These courts have limited original jurisdiction in probate, insanity, and minor civil and criminal matters arising under Territorial statutes and the Federal statutes applicable to the Territory.

Each incorporated municipality has a magistrates court which has jurisdiction over cases arising under local ordinances.

Prior to 1953 law enforcement outside of incorporated municipalities was almost exclusively the responsibility of the United States Marshals aided by the Territorial Highway Patrol. The 1953 Legislature, recognizing that the development of the Territory required its government to take a more positive role in law enforcement, abolished the Highway Patrol and created in its stead the Department of Territorial Police. The Department was charged with the enforcement of all Territorial laws and was granted the powers previously held by peace officers of the Territory or municipalities and such power as is usual and customary with peace officers.

The fiscal system of the Territory is controlled by laws enacted by the Territorial Legislature and is separate from revenues received by the Federal Government. The "License Statute," enacted by Congress

in 1899 and 1900, under which the Federal Government collected license fees on certain occupations and lines of business and transferred them to the Territory through the "Alaska Fund," later was repealed.

During the period from 1947 through 1955, the Territory of Alaska made significant changes in its fiscal system giving it a tax schedule sufficient to meet the needs of expanding Territorial governmental services.

In 1947 Territorial revenues were derived almost entirely from a miscellany of license fees and taxes. In 1947 these revenues were reported to amount to only $2,745,979, of which three taxes—an excise tax on liquor, a tax on the salmon pack, and the motor fuel oil tax—accounted for 59.85 percent.

The 1949 Legislature drastically overhauled the fiscal system of the Territory and for the first time gave it a series of revenue statutes which could be considered to constitute a basic tax structure. These revised revenue statutes included an income tax on persons and corporations; a business-license tax on occupations, professions and various businesses; a tax on the sale of canned salmon; a raw-fish tax; a fishermen's license tax; a tobacco tax; motor-fuel oil tax; a graduated tax on fish traps; and a tax on automobiles and their drivers. Together with the liquor tax and a school tax, these statutes, as modified by the 1951, 1953 and 1955 Legislatures, are the principal sources or Territorial revenue. These revenues have increased from the $2,745,979 in 1947 to a tax collection of $15,083,725 for the fiscal year ended June 30, 1954 and $21,651,119.52 for the fiscal year ended June 30, 1957.

The 1955 Legislature in accordance with recommendations made by the Governor revised the Territory's fiscal procedures, changing the beginning of the fiscal year from April 1 to July 1 and creating a Department of Finance. The newly-created Department is headed by a Director of Finance, appointed by the Governor and confirmed by the Legislature, and includes a budget officer and a Controller. The establishment of this Department modernizes and marks a vast improvement in the management of the fiscal affairs of the Territory.

Statehood

Following is a summary of congressional investigations of statehood for Alaska, 1916–57.

I. The First Legislation in 1916

First bill proposing statehood for Alaska, H. R. 13978, was introduced in the House of Representatives.

II. The 1947 Congressional Investigations

April 16–24, House Public Lands Committee hearings in Washington.
August 30 to September 12, House committee hearings in Alaska.

III. The 1948 Congressional Investigations

April 14, House Public Lands Committee unanimously reported favorably H. R. 5666 for Alaska statehood to House. No action by House.

IV. The 1949 Congressional Investigations

March 4 and 8, House Committee on Interior and Insular Affairs held hearings in Washington.
March 10, House committee, with one dissenting vote, reported H. R. 331 to the House.

V. The 1950 Congressional Investigations

March 3, House of Representatives voted 186 to 146 to pass H. R. 331 granting statehood to Alaska.
April 24–29, Senate Committee on Interior and Insular Affairs conducted hearings on statehood, hearing 57 witnesses in Washington.
June 28, Senate committee voted 8 to 2 to report favorably H. R. 331.

VI. The 1951 Congressional Investigations

April 3, Senate Committee on Interior and Insular Affairs voted 7 to 6 to report favorably S. 50 on Alaskan statehood after executive consideration of the measure.

VII. The 1952 Congressional Investigations

February 27, the Senate voted 45 to 44 to recommit S. 50 to committee after debate on a motion to take up the bill.

VIII. The 1953 Congressional Investigations

April 14, 15, 16, and 17, House Subcommittee on Territories and Insular Possessions held hearings in Washington, hearing 22 witnesses.
June 2, House committee, by a vote of 19 to 4, approved H. R. 2982, for Alaskan statehood, and reported it June 26.
August 17, 18, 19, 20, 24, and 25, Senate committee held hearings in Alaska to hear 140 witnesses.

IX. The 1954 Congressional Investigations

January 20, 21, 22, 25, 27, 28, 29, February 1, 2, 3, 4, and 24, Senate Committee on Interior and Insular Affairs held hearings in Washington on S. 50 for Alaskan statehood, hearing 12 witnesses.

February 24, Senate committee favorably reported S. 50.

March 4, Senate floor debate on statehood started.

April 1, Senate voted to combine Hawaii and Alaska statehood proposals in H. R. 3575, substituting the language of S. 49, and to pass H. R. 3575.

X. The 1955 Congressional Investigations

January 25, 28, 31, February 2, 3, 4, 7, 8, 14, and 15, House Committee on Interior and Insular Affairs conducted hearings on nine bills, including H. R. 2535 and 2536, proposing combined consideration of Hawaiian and Alaskan statehood, and H. R. 185 and 248, proposing statehood for Alaska.

February 15, House Committee voted 19 to 6 to report favorably an amended combination statehood bill to the House.

February 21, Senate Committee on Interior and Insular Affairs opened hearings on three bills, S. 49 granting statehood to both Hawaii and Alaska, and S. 399 and 402 for elective governors.

March 3, 1955, House Committee reported H. R. 2535, a combined Alaska-Hawaii bill.

May 10, 1955, House of Representatives voted to recommit H. R. 2535 without instructions. No further Congressional consideration was given the legislation in the 84th Congress.

XI. The 1957 Congressional Investigations

March 11, 12, 13, 14, 15, 20, 25, 27, 28, 29, House Committee on Interior and Insular Affairs conducted hearings on H. R. 50; H. R. 340; H. R. 628; H. R. 849; H. R. 1242, and H. R. 1243 (combined bill).

March 25 and 26, Senate Committee on Interior and Insular Affairs conducted hearings on S. 49. June 25, 1957, House reported H. R. 7999. August 29, 1957, Senate Committee reported S. 49.

The 1955 Legislature authorized the election of Delegates to and the convening of a convention to draft a proposed constitution for a future state government. The convention concluded its deliberations on February 5, 1956, with the signature of the draft constitution by the delegates. The document was presented to the electorate of Alaska on April 24 when it was ratified by a majority of the voters. In accordance with the terms of ratification of the constitution, a copy was transmitted to the President for submission to the Congress.

One of the ordinances accompanying the proposed Constitution provided, if approved, for the election of two senators and one representative. The election of the senators and representative follows the so-called Tennessee Plan originally used at the time that Tennessee petitioned for admittance to the Union. The Alaska-Tennessee Plan ordinance was approved by the Alaskan electorate on April 24, 1956. Two "senators" and one "representative" were elected at the General Election on October 9, 1956.

Alaska's Governors

	Date of appointment
John H. Kinkead, Nevada	July 4, 1884
Alfred P. Swineford, Michigan	May 7, 1885
Lyman E. Knapp, Vermont	Apr. 12, 1889
James Sheakley, Alaska	June 28, 1893
John G. Brady, Alaska	June 23, 1897
Wilford B. Hoggatt, Alaska	Mar. 2, 1906
Walter E. Clark, Connecticut	May 20, 1909
John F. A. Strong, Alaska	May 1, 1913
Thomas Riggs, Jr., Alaska	Apr. 12, 1918
Scott C. Bone, New York	June 16, 1921
George A. Parks, Alaska	June 16, 1925
John W. Troy, Alaska	Apr. 19, 1933
Ernest Gruening, Alaska	Dec. 6, 1939
B. Frank Heintzleman, Alaska	Apr. 10, 1953
Mike Stepovich, Alaska	June 8, 1957

Cities and Towns

ALASKA'S CITIES AND TOWNS are not unlike those in the United States. The same pattern exists of shopping streets, schools, churches, chambers of commerce, civic organizations, and clubs that are found in almost any town in the States. The great difference is that Alaska towns are scattered widely throughout the Territory, separated by vast areas of sparsely populated land. Some of the towns are connected with other centers only by ship, river boat, or airplane; others also are connected by railroad and highway. Other roads and means of communication are being constructed as rapidly as possible. Most cities and towns are modern and progressive and have churches, theaters, bowling alleys, baseball parks, night clubs, department stores, dress shops, bus lines, taxis, modern hospitals, clinics, banks, radio broadcasting stations—broadcasting many of the national programs as well as making use of local talent—and other modern services, and equipment familiar to Americans. Some of the larger towns, Fairbanks, Anchorage, Palmer, Cordova, Seward, Juneau, Sitka, Ketchikan, Petersburg, and Wrangell, recently have developed an Alaska Music Trail Circuit which offers stage and concert productions. Residents are accustomed to normal comforts and many luxuries in Alaska and they live as easily as the average American. Schools are modern, educational standards are high and the instructors carefully chosen. Airplanes are used widely by passengers and for hauling freight.

All Alaska settlements are interesting and, whether a remote cannery, mining camp, native village, or a modern town, are surrounded by some of the world's scenic wonders.

Information concerning the largest cities and towns is summarized for convenience. Additional information may be obtained from the city's Chamber of Commerce, or from the Alaska Resource Development Board, P. O. Box 50, Juneau, Alaska.

Cities and Towns—Summarized

Anchorage

Alaska's largest city. Residential, business, service, professional, transportation and communication center of Alaska. Modern and progressive. Principal economic activity includes government, trade, service, finance and transportation. Some manufacturing and processing of items for local market use. Situated on Knik Arm, a northern tributary of Cook Inlet. Elevation, 100 feet. Highways connect Anchorage to Seward, Kenai Peninsula, Matanuska Valley and Alaska Highway to the United States, as well as to Valdez and Fairbanks. Connected by rail with Seward, Whittier and Fairbanks. One of the principal air centers of the world—on a direct route of several airlines to the Orient. Daily airplane service to most Alaskan points and to the continental United States. Municipal Airport—Merrill Field and Anchorage International Airport. Headquarters city for the northern defense efforts—Alaskan Command, Alaskan Air Command, U. S. Army, Alaska, Elmendorf Air Force Base and Fort Richardson Army Post. Rentals range from $145 to $185 for a two-bedroom home.

CITY OF ANCHORAGE, ALASKA.

Housing shortage is acute. Plans are under way for the construction of $8,700,000 dock facilities. Headquarters of the Alaska Railroad and many trucking firms. There are 38 churches, 12 grade schools, 1 junior high school and a modern high school. Modern hospital facilities, several medical clinics. Four theaters, 2 daily newspapers, 3 radio stations, 2 television stations, 3 national banks and over 1400 various business establishments. Paved roads to Matanuska Valley and to Seward. Scenic assets: Kenai Peninsula, Portage Glacier, Chugach and Talkeetna Mountains, the Alaska Range, and nearby Lake Spenard, a popular recreational area. Principal hotels: Anchorage, Westward, and Traveler's Inn.

Circle City

On Yukon River, about 50 miles south of Arctic Circle. Indian village. Historic placer mining center. Reached by automobile, bus, or plane. Steese Highway from Fairbanks. Good hunting and fishing. Circle Hot Springs, 26 miles southeast, is a resort centering around the springs. Rooms may be obtained at the Circle Hot Springs Resort.

College

Site of the University of Alaska and the Agricultural Experiment Station connected with the college. Three miles west of Fairbanks. The Experiment Station's program is experimental work in dairying, hog production, potato improvement, grain breeding, and hay crops.

Cordova

Natural resources are fish and minerals. Once outlet and service center for the rich Kennecott copper mine, now exhausted, which was reached by railroad. Situated on shores of Orca Inlet and is the center for the Prince William Sound fishing industry, one of the richest in Alaska. Reached by steamer from Seattle or Seward, or airplane from Juneau or Anchorage. Fourteen canneries; 4 large salmon canneries and the largest crab and clam canneries in Alaska. Located in trade area are numerous canneries and reduction plants, 9 mining camps, 7 logging camps, and 1 saw-mill. Scenic assets: Mountains, Miles and Childs Glaciers, Lake Eyak and Sheridan, and an island-studded seashore. Attractive to tourists, sports fishermen, and big-game hunters. Excellent skiing. Principal hotels: Northern Alaskan and Windsor. A new highway is under construction following the route of the historic Copper River and Northwestern Railroad, which at one time served the Kennecott Copper mines on the Chitina River.

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Fairbanks

Mining and transportation center. Major seasonal industries; mining and construction. Nonseasonal; trade, service, transportation, and government. Second largest city. Situated near the geographical center of Alaska, 400 miles north of the Gulf of Alaska, 175 miles south of the Arctic Circle. Altitude, 432 feet. Center of gold mining operations. Connected with continental United States by the Alaska Highway. Major commercial aviation center with international airport. Chief departure point for flights to Nome, Barrow, Wiseman, Kotzebue and points in the vast interior. Daily airplane service to Anchorage and Seattle. Nonscheduled airlines serve outlying towns and mining camps. Special tourist flights made above the Arctic Circle during summer months. Two large United States Air Force bases, Ladd Field, large cold-weather test field, and Eielson Field are southeast of the city. Terminus for the Steese Highway, Alaska Highway, and The Alaska Railroad. Rents for one-bedroom houses from $100 to $125 a month. Many churches. Two radio stations. Two television stations. Two banks. One daily and 1 weekly newspaper. Placer gold mining, some gold lode mining. Market for agricultural products from Tanana Valley. Farthest north golf and country club in the world. Highways lead to Circle, Livengood, Anchorage, and Valdez. University of Alaska at College, 3 miles away. During World War II—an important link in the lend-lease airway to the U. S. S. R. Principal hotels: Traveler's Inn, Fairbanks, Nordale, Northern, and Pioneer.

Haines

Chief industries; transportation, fishing, and lumbering. Located west side of Chilkoot Inlet near the northern end of Lynn Canal. Accessible by steamer and by airplane from Juneau. Connected with interior of Alaska and Yukon Territory, Canada, by motor road, the Haines Cut-Off, constructed as a transportation connection with the Alaska Highway. Outlet for the Porcupine mining district in Alaska and the Rainy Hollow mining area in British Columbia. Excellent hunting and fishing. Area famous for fine strawberries, vegetables, and root crops. Principal hotels: Haines, Halsingland, and Sheldon. A former army post, Chilkoot Barracks, is being developed as an all-year port and resort area. Haines is the terminal for the new oil pipeline to Fairbanks.

Homer

Homer is situated east of Seward on the Kenai Peninsula, and is bounded by Kachemak Bay and Cook Inlet. It is primarily a farming

hunting and fishing country of gently sloping hills with a soft loamy soil, covered in its virgin state with a beautiful grass growth. The growing season is long, grazing extending over a period of from seven to eight months. Conditions generally are favorable to farming and dairying as the climate is mild and rainfall sufficient.

This region also has veins of coal outcropping on either shore. The adjacent waters provide crab, shrimp, clams, halibut and salmon in season. Moose, bear, and sheep hunting can be had in the immediate vicinity. The community owns a very good dock. Several small boats run to Seward and Anchorage. There are also a cold storage plant, a sawmill, a theater, and stores in Homer. The town is on a highway system connecting Seward and the Kenai Peninsula with Anchorage and other inter-Alaska points.

Juneau

Capital of Alaska and major distribution center. Seasonal industries; fishing, food processing, mining construction, and lumbering. Non-seasonal; trade, service, transportation, and government. On Gastineau Channel, 1,033 statute miles northwest of Seattle, Washington. City of Douglas on opposite shore of Channel—connected with Juneau by

NOME, ALASKA.

CITY OF JUNEAU. AERIAL VIEW FROM SOUTH OVER GASTINEAU CHANNEL.

AERIAL VIEW OF KETCHIKAN. FRONT CENTER IS BUSINESS DISTRICT, WITH THE TWO HARBOR FACILITIES SHOWN IN FRONT CENTER AND RIGHT LOWER CORNER.

highway. Beautiful mountain setting. Moderate but damp climate. Rents for one-bedroom apartments from $80, but housing shortage is acute. Transportation crossroad, lumbering, and fishing center. Harbor open all year. Protected small-boat harbor. Large steamer wharf. American and Canadian steamships call weekly from Seattle and Vancouver. Good airport 9 miles from city. Seaplane floats and service. Daily plane service to Sitka, Skagway, Haines, Ketchikan, Wrangell, Petersburg, Cordova, Anchorage, and Seattle, with two flights weekly to Fairbanks. Nearest railway is at Skagway, at head of Lynn Canal. Two grade schools, one high school, and one parochial school. One private hospital, one government hospital. One medical clinic. Two banks. One daily and one weekly newspaper, TV station, one plywood plant and one sawmill. Site of future pulp mill. Numerous churches. One radio station. Territorial museum. Location of headquarters in Alaska for most of the Territorial Government departments and the Federal agencies. Location of world famous Alaska-Juneau Gold Mine, now inactive, which produced more than 12,000 tons of ore daily when operating. Tee Harbor, loading point for an automobile ferry running 70 miles to Haines, 19 miles north on Glacier Highway. Auke Bay, a sport-fishing center, 12 miles north. Auke Village, Lena Cove and Mendenhall Glacier recreation areas. Douglas ski bowl. Short boat or plane trips to resorts at Taku and Excursion Inlets. Roads lead to Silver Bow Basin, Mendenhall Glacier, Douglas Island and Eagle River. Many trails for hiking. Principal hotels: Baranof, Gastineau, and Juneau.

Ketchikan

Fishing, lumber, pulp and commercial center. Major seasonal industries: fishing, food processing, mining, construction and tourist. Nonseasonal: lumber, pulp, trade, service, transportation and miscellaneous manufacturing. Located on Revillagigedo Island, 757 miles (by sea) and 650 miles (by air) north of Seattle, Washington. Separated from the mainland by Behm Canal (1 mile). First port of call in Alaska for northbound steamships. Salmon canning center. Largest pulp and lumber producing center in Alaska. Leading port in Southeastern Alaska. Location of one of the most modern sawmills on the Pacific coast. Location of a new (1954) ultra-modern pulp mill, costing over $50 million. Apartments rent for $75 to $140 per month and houses for $90 to $160 per month. Adequate number of apartment rentals and limited number of house rentals. Regular scheduled and chartered steamship freight service from the north and south. Steamship passenger service via Canadian steamships. Daily air passenger and freight service north and south. No railroads. Airport located on nearby Annette Island. Airplane floats and seaplane facilities at

Ketchikan. Nineteen churches. Two grade schools and one high school. One theater. One daily and one weekly newspaper and one monthly magazine. Two banks. Two radio stations and one TV station. Three large cold storage plants, five canneries. Two marine ways and small boat basin (and one more scheduled for construction 1956–57). Highly mineralized area: gold, copper, uranium, marble, and others. Special interests are curio shops, fish hatchery, canneries, pulp mill, Ward Lake recreational area, totem pole parks at Saxman and Mud Bight. Principal hotels: Gilmore, Ingersoll, and Stedman.

Kodiak

On Kodiak Island, about 1,400 miles northeast of Seattle, Washington. Chief industries; fishing and cattle raising. Fishing resources: notably crab, salmon, herring, and halibut. One of the oldest settlements in Alaska. Accessible by steamer from Seattle or Seward, or plane from Anchorage. Big-game hunting, especially the huge Kodiak brown bear. Distribution point for adjacent islands and west along

PETERSBURG, SOUTHEASTERN ALASKA.

the Alaska Peninsula. Site of Army and Navy bases. United States Naval Air Station, 5 miles away. Principal hotel: Kodiak.

Nenana

On Tanana River, 60 miles from Fairbanks. Accessible by train or plane from Fairbanks or Anchorage. Principal hotel: Nenana.

Nome

On Seward Peninsula. Built during the famous gold rush days. Main supply center for a large and rich placer mining district. Steamers can reach town only 5 months of the year—June to October. Transportation and communication during other 7 months is by plane and dog team. Accessible by airplane from Anchorage or Fairbanks. Serves the mining districts and the native villages for miles around. Main stop for tourist excursion flights to Kotzebue and other Arctic points. Center for native arts and crafts, an important industry. Natives, famed ivory carvers of King Island and Little Diomede Island, fish here during the summer and barter for their winter supplies. Home of the Northwestern Alaska Fair. Principal hotels: Polaris and Wallace.

North Pole

Located on Alaskan Highway about 14 miles from Fairbanks. Christmas is the little village's (350 pop.) year round business. It was named because of the value it would have at Christmas time. It has a school, a cafe, two service stations, two taverns and a trading post. The postmaster, who is also mayor and storekeeper, placed the special North Pole stamp on 200,000 Christmas letters in 1955.

Palmer

Since 1950 Palmer has been incorporated as a first class city. Population about 1500. Two large apartment houses, and several smaller ones. One bedroom apartments range from $85–$130 per month. Headquarters and laboratory of Alaska Agricultural Experiment Station located in Palmer; one of its three farms, the Matanuska Experimental Farm, is located 6 miles away and is a favorite stop for visitors. Three schools—new elementary school, high school and a combination elementary-junior high. Also headquarters of Alaska Soil Conservation Service and the Alaska Department of Agriculture.

Matanuska Valley completely electrified by one of first REA co-ops in territory. First RTA telephone system in Alaska established modern

dial communication for more than 600 original member-subscribers in 1956. New modern 24–36 bed hospital, completely equipped, in Palmer. Tourist attractions are farms located on Matanuska Valley farm roads and scenic mountain drives through Talkeetna Mountains.

Petersburg

On north end of Wrangell Narrows, halfway between Ketchikan and Juneau, on the Inside Passage. Most ships, passenger and freight, stop on their way to and from Seattle. Shrimp capital of Alaska. Fishing chief occupation—halibut, salmon, trout, herring, crabs, shrimp, and clams are caught commercially. Large canneries. Storage plant, capacity of 3,000,000 pounds. Three small sawmills supply boxes and other cannery needs. University of Alaska operates a fur farm branch of its experimental station, the Experimental Fur Farm. Outfitting point for game hunters. Weekly newspaper. Headquarters of airlines reaching nearby points. Accessible by plane from Ketchikan or Juneau. Good hunting and fishing. Scenic asset: nearby LaConte Glacier. Principal hotel: Arctic.

Port Chilkoot

Incorporated in 1956. It is the former army post known as Chilkoot Barracks, and is located adjacent to Haines at the northern end of the Lynn Canal.

Seldovia

On southwestern shore of Kenai Peninsula on Cook Inlet. Only land-locked harbor between Seward and Anchorage large enough to accommodate ocean-going vessels. Reached by airplane from Anchorage. Main industries; fishing and agriculture. Central port of distribution for Cook Inlet towns. Three canneries. Two herring curing plants. Lignite coal beds have been found along the shores of the Inlet. Good hunting and fishing. Principal hotels: Beachcomber and House of O'Brien.

Seward

On the north end of Resurrection Bay, about 1,500 miles northwest of Seattle. Named for William H. Seward, Secretary of State, who negotiated for the purchase of Alaska from Russia. Accessible by highway, rail or plane from Anchorage or Fairbanks. Known as the Gateway City to the interior and metropolis of Kenai Peninsula. One of the ocean terminals of The Alaska Railroad; other ocean terminal

for the railroad is the port of Whittier. Port at Seward open all year; a stop for the regular mail and passenger ships from Seattle. Completely surrounded by mountains. Two saw-mills. Vegetables and flowers grow quickly and abundantly. Semi-weekly newspaper. Kenai Lake recreation area and resorts nearby. Two ski areas on Seward-Anchorage Highway. Principal hotels: Palace, Portland, New Seward, and Van Gilder.

Sitka

On the west side of Baranof Island, 980 miles northwest of Seattle. Surrounded by high peaks and small wooded islands. One of the most historic communities in Alaska. Capital of Russian America at one time and capital of Alaska during early years of American ownership. Accessible by steamer from Seattle or by seaplane from Juneau or Ketchikan. Harbor docks more than a thousand small fishing boats. Ranks as the world's leading port for king salmon. Salmon cold storage plant. Location of oldest school in Alaska—Sheldon Jackson High School and Junior College. Across Sitka Sound is Mt. Edgecumbe, an extinct snow-capped volcano. Site of future pulp mill. Daily newspaper. Two radio stations. Bureau of Indian Affairs operates and maintains the nearby Mt. Edgecumbe school. The United States Public Health Service operates the nearby Mt. Edgecumbe tuberculosis center and orthopedic hospital. Objects of great interest: Pioneers' Home near the dock, surrounded by landscaped grounds featuring native Alaskan plants; Sitka National monument, 57 acres, with its Indian totem poles, winding trails, and replica of a Russian block-house; Ancient Russian Church with its icons, paintings, and jewels; St. Michael's Cathedral, completed in 1842, Eastern Orthodox

MOUNT EDGECUMBE AND SITKA, ALASKA.

design, decorated with aged icons, or holy paintings; the Russian cemetery, notable for its headstones dating to 1799 and National Cemetery. Principal hotel: Sitka.

Skaguay

In a level valley at the head of Lynn Canal. Ocean and southern terminal for the 110-mile White Pass and Yukon Route railway to Whitehorse, Yukon Territory. A scenic city dwarfed by steep mountains. Chief occupations, railroading and longshoring. Southern terminus of oil pipe line system extending to Whitehorse and Fairbanks. Distribution point, during World War II, for supplies used in building the Alaska highway. Principal hotels: Golden North and Pullen House.

Valdez

At the head of mountain-enclosed Valdez Arm on Prince William Sound. Northernmost all-year port in Alaska. Approximately 1,600 miles from Seattle by direct steamer line. Coast terminus of the Richardson Highway. Reached by steamer, automobile, and airplane. Major industries; trucking, fishing and mining. Distribution center and source of supplies for adjacent mining, fur farming, and fishing industries, as well as for points along the Richardson Highway. Native villages of Tatitlek and Ellamar nearby. Points of interest: Columbia Glacier, Keystone Canyon, and Bridal Veil Falls. Principal hotels: Valdez, Alaskan and Port Valdez motel.

Wrangell

Shellfish and fishing center. Major seasonal industries; fishing, food processing, and construction. Nonseasonal; lumber, trade, service, fur farming, and transportation. On Wrangell Island in southeastern Alaska, 125 miles south of Juneau, 100 miles north of Ketchikan, and 820 miles from Seattle, Washington. Accessible by steamer from Seattle and daily seaplane service from Ketchikan or Juneau. Harbor open all year. Weekly mail boat service between Wrangell and Petersburg. Several churches. One weekly newspaper. Ocean terminal for steamers running the Stikine River to Telegraph Creek in British Columbia. Outfitting point for big-game hunters and sport fishermen. Local sawmill, capacity 100,000 feet a day, furnishes salmon boxes to several canneries. Alaska red cedar shingles are manufactured and shipped to various points in Alaska. Gateway to the northern section of British Columbia noted for its mineral resources and big-game hunting. Noted, historically, as the outfitting

SKAGWAY, TERMINUS OF THE WHITE PASS AND YUKON RAILWAY.

WRANGELL, GATEWAY TO THE STIKINE RIVER.

center for miners during the gold rush days. Points of interest: Chief Shakes community house and totem poles; Wrangell Institute, an elementary boarding school maintained by the Bureau of Indian Affairs for approximately 200 orphans; and petroglyphs left by aboriginal inhabitants many years ago. Principal hotel: Wrangell.

Housing

It was not until the first years of World War II that Alaska faced a serious housing shortage. With the beginning of the stepped up defense activities just prior to World War II and through the period of that conflict, thousands of defense workers and service personnel went to the Territory and within a short time the population of Alaska actually doubled.

To house war workers, the Federal Public Housing Administration constructed and operated a total of 324 family dwelling units at Juneau, Anchorage and Fairbanks until 1945 at which time the Alaska Housing Authority, created by an act of the Territorial Legislature in 1945, assumed management. The express purpose of the Alaska Housing Authority was to study ways and means to alleviate the acute housing shortage and to recommend and seek passage of legislation which would establish such a program, including the production of new homes and the establishment of a sound and self sufficient home building industry.

In 1949 Congress enacted the Alaska Housing Act which (1) authorized the Federal Housing Administration to increase by one-third the limit of FHA insurance in Alaska, (2) permitted the Federal National Mortgage Association to purchase Alaskan mortgage paper in any amounts necessary to assure that adequate housing would be constructed in the Territory, (3) authorized a loan of $15,000,000 as a revolving fund to the Alaska Housing Authority to be administered by the Housing and Home Finance Agency, and (4) authorized a housing program for the natives in the remote areas of Alaska.

Prior to 1949 only 48 mortgages had been insured by the Federal Housing Administration. Since the enactment of the Alaska Housing Act, the FHA has written mortgage insurance and mortgage insurance commitments on 7,313 dwelling units. The Federal National Mortgage Association has purchased mortgages on 4,863 dwelling units and the Alaska Housing Authority has financed construction of 1,297 dwelling units and provided second mortgage financing for an additional 268 units. The Authority has also made loans to more than 600 residents of the remote areas of Alaska for construction or improvement of homes. These loans were limited to $500 per individual

and provided the materials necessary to build or improve existing hut type dwellings and were made on the basis of unsecured character loan notes.

The Alaska Housing Authority also owns and maintains a total of 325 low rent units located in the four major cities of Alaska, namely, Anchorage, Fairbanks, Ketchikan and Juneau.

In 1951 the Territorial Legislature designated the Alaska Housing Authority to act as the Redevelopment Agency for the Territory of Alaska and up to this time nine cities have asked for and are receiving assistance in obtaining Urban Renewal programs to stop blight and remove slums. The first application for an Urban Renewal Program in the Territory was approved in September of 1955 for the City of Fairbanks and this project is now in the site acquisition and clearance stage.

In 1954 it was felt that the basic objectives of the Alaska Housing program, namely, to provide a supply of new dwelling units to overcome the acute housing shortage following World War II and the establishment of a self sufficient private home building industry had been accomplished. Consequently, the Housing Act of 1954 repealed the section of the Alaska Housing Act which dealt with the special authority of the Federal National Mortgage Association to act in Alaska. Also it was the intention of the Housing and Home Finance Administrator to liquidate the revolving fund resulting in no financing of home construction being made through the Authority since 1953.

With the supply of neat, modern houses and apartments, more people have been making their permanent homes in Alaska. However, because the banks and other lending institutions in the Territory are limited in making home loans without a secondary mortgage outlet, new construction is virtually at a standstill and housing is again becoming very short.

An accelerated military program, rapid development of highways, hydroelectric power, development of pulp mills, oil exploration and other permanent improvements are drawing a permanent population into the Territory more rapidly than housing can be supplied. To remedy this situation, the Alaska Housing Authority is seeking the cooperation of the Housing and Home Finance Agency to secure legislation to permit the Authority to act as a secondary mortgage market for the Territory of Alaska, much the same as the Federal National Mortgage Association acts in the states, in the event that special privileges are not again allowed the Federal National Mortgage Association to operate successfully in Alaska.

It is a known fact that housing is a major factor in the basic economy and development of a community and given the opportunity, the Alaska Housing Authority stands ready and willing to meet the housing needs of the Territory.

Chambers of Commerce

City	*Organization*
Anchorage	Alaska Junior Chamber of Commerce.
	Anchorage Chamber of Commerce.
	Anchorage Junior Chamber of Commerce.
Bethel	Bethel Chamber of Commerce.
Cordova	Cordova Chamber of Commerce.
Dillingham	Bristol Bay Chamber of Commerce.
Douglas	Douglas Chamber of Commerce.
Fairbanks	Fairbanks Chamber of Commerce.
	Fairbanks Junior Chamber of Commerce.
Haines	Haines Chamber of Commerce.
Homer	Homer Chamber of Commerce.
Juneau	Juneau Chamber of Commerce.
Ketchikan	Ketchikan Chamber of Commerce.
Kodiak	Kodiak Chamber of Commerce.
Nenana	Nenana Chamber of Commerce.
	Nenana Junior Chamber of Commerce.
Nome	Northwestern Alaska Chamber of Commerce.
Palmer	Matanuska Valley Chamber of Commerce.
Petersburg	Petersburg Chamber of Commerce.
	Petersburg Junior Chamber of Commerce.
Seldovia	Seldovia Chamber of Commerce.
Seward	Seward Chamber of Commerce.
Sitka	Sitka Chamber of Commerce.
Skagway	Skagway Chamber of Commerce.
Valdez	Valdez Chamber of Commerce.
Wrangell	Wrangell Chamber of Commerce.

Newspapers

City	*Newspapers*
Anchorage	Anchorage Daily News (daily)
	Anchorage Daily Times (daily)
	Nosy News (weekly)
	The Anchorage Spotlight (weekly)
	Alaska Labor News (weekly)
Cordova	Cordova Times (weekly)
Fairbanks	Fairbanks Daily News-Miner (daily)
	Jessen's Weekly (weekly)
Homer	Homer Herald (weekly)
Juneau	Daily Alaska Empire (daily)
	Juneau Independent (weekly)
Ketchikan	Ketchikan Alaska Chronicle (daily)
	Ketchikan Daily News (daily)
Kodiak	Kodiak Mirror (weekly)
Nome	Nome Nugget (tri-weekly)
Palmer	Valley Frontiersman (bi-weekly)
Petersburg	Petersburg Press (weekly)
Seward	Petticoat Gazette (weekly)
Sitka	Daily Sitka Sentinel (daily)
Valdez	The Valdez Breeze (weekly)
Wrangell	Wrangell Sentinel (weekly)

Communications

THE ALASKA COMMUNICATION SYSTEM, established by Congress in 1900 as a part of the United States Army Signal Corps, is governed by the Alaska Aeronautics and Communications Commission Board, and handles all military communications in Alaska and processes all commercial communications to and from Alaska and between Alaskan points.

The system maintains headquarters in Seattle, Washington, and facilities include a radio network providing teletype service, overseas radiotelephone service consisting of apparatus used to transmit "live" broadcasts to continental United States, an extensive submarine cable system, a cable ship, land line facilities along the Alaska Highway within Alaska, and high frequency facilities between points to southeastern Alaska. Installations maintained in Alaska are at Adak, Amchitka, Anchorage, Atka, Attu, Barrow, Bethel, Big Delta, Cordova, Craig, Fairbanks, Galena, Haines, Juneau, Ketchikan, Kodiak, Kotzebue, Naknek, Nome, Northway Junction, Petersburg, Seward, Sitka, Skagway, Valdez, Whittier, Wrangell, and Yakutat.

Alaska Communication System services provide telephone and telegraph service between Alaskan points and practically any point in the world.

Radiotelephone service has been available between various cities in Alaska only since the establishment of facilities by the Alaska Communication System during and since World War II. Calls now may be placed between practically any city or town in the Territory. Telephone communications between Alaska and the United States have recently been improved with the laying of submarine cables from the Pacific Northwest to the Territory.

Mail

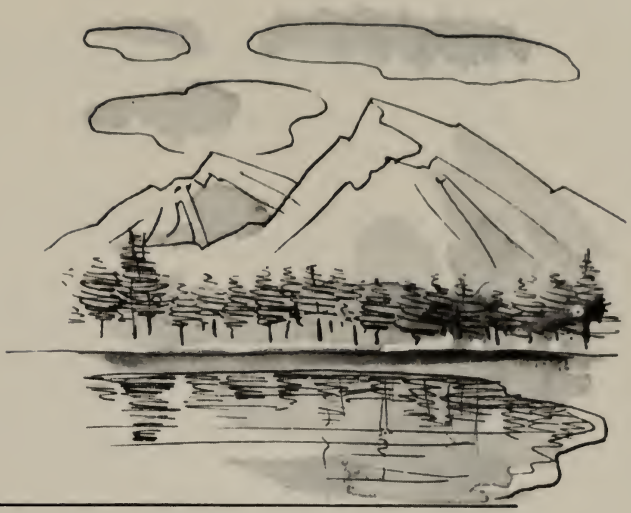
Each year to a greater degree the airplane has succeeded the dog team and power boat along Alaska's mail routes, carrying the majority of the mail between points in Alaska as well as between Alaska and continental United States. The dog team was a great factor in Alaska's development and until a few years ago the task of carrying the mail in the interior was the job of the musher and his team. Today the service is substantially accelerated by airlines, nonscheduled carriers, and bush pilots.

Mail on which domestic postage rates have been paid goes by boat to southeastern and south-central Alaska and to communities along the rail belt and continues inland via The Alaska Railroad. Mail for Nome, northwestern Alaska, or other outlying points, goes from Anchorage or Fairbanks by "star route" which is conducted for the most part with airplanes.

In 1949 and 1950 a parcel post zoning system based on distance was set up in Alaska which led to the reduction of parcel post rates between many points in the United States and Alaska. Transportation of mails in Alaska is under the supervision of the superintendent of the Thirteenth Division, Railway Mail Service, Seattle, Washington.

Carrier delivery, house to house service, is now offered by the Post Office Department in Anchorage, Ketchikan, Juneau, and Fairbanks.

Education



THE TERRITORIAL GOVERNMENT administers a school system, for white and native students, composed of 100 schools (29 incorporated and 71 rural) and the University of Alaska. Direction and supervision of the public schools is under the Territorial Board of Education, with the Commissioner of Education at Juneau as the executive officer.

The Federal Government administers schools in about 84 native villages where there are no Territorial schools. Administration is under the Juneau Area Office of the Bureau of Indian Affairs, United States Department of the Interior. Territorial schools include Eskimo, Indian, and Aleut pupils. Education of the native children is being transferred from Federal to Territorial jurisdiction as rapidly as conditions justify. To facilitate this transfer, Federal-owned school buildings and equipment are transferred to the Territory or to local communities, without charge, when Federal schools are transferred to Territorial Administration. The Territorial Department of Education also operates 22 schools under a Johnson-O'Malley contract with the Bureau of Indian Affairs.

Mission schools throughout the Territory provide educational opportunities for approximately 600 native children.

Sheldon Jackson High School and Junior College in Sitka, the oldest school in Alaska, is operated by the Board of National Missions of the Presbyterian Church. It was named in commemoration of Sheldon Jackson, a Prebyterian minister who went to Alaska in 1877 and became the first United States Commissioner of Education to the Territory. Originally a school for native children, this school now has become a junior college for all Alaskans. It is on the accredited list of the Northwest Association of Secondary and Higher Schools and follows closely the course of study prepared for the schools of Alaska

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by the Commissioner of Education. Further information may be obtained by writing The Registrar, Sheldon Jackson School, Sitka, Alaska.

Territorial Schools

General supervision and direction of the Territorial public schools is vested in the Territorial Board of Education, which consists of 5 members—one from each of the 4 judicial districts and one at large, appointed by the Governor and approved by the Legislature. The Board prescribes rules and regulations for the general government of unincorporated schools, the certification of teachers, and other matters pertaining to the general welfare of the schools. The Commissioner of Education serves as executive officer of the Board and carries these rules and regulations into effect. In addition, he administers the school laws that prescribe certain duties to his office.

The two general classes of Territorial public schools are (1) schools within incorporated cities, independent school districts, and incorporated school districts, and (2) rural schools located outside incorporated cities and school districts.

Incorporated Cities School Districts

Every incorporated city constitutes a school district. The common council is given certain powers regarding buildings and funds, but when a school is established it is under supervision and control of a school board of three members elected to serve a 3-year term with one new member being elected each year.

All adults who are citizens of the United States or who have declared their intention to become such, and who are residents of the school district, are eligible to vote for school board members in the incorporated cities.

Applicants for teaching positions should write directly to the clerk of the school board of the city in which employment is desired.

Independent School Districts

Independent school districts are established by people of any incorporated city and its adjacent settlement or settlements; provided that such districts do not embrace more than 500 square miles. Each district has a school board of five members who have the exclusive management and control of school matters in the district, subject to Territorial school laws and regulations. The Board has the power to appoint from its

number, or from the residents of the district, an assessor who places an assessed valuation on all real and personal property inside the city limits and that outside the city which is included in the school district. This assessment is made in accordance with the valuations of similar property within the city.

All citizens of the United States who are 21 years of age or over, bona fide residents of Alaska continually during the entire year immediately preceding the election, residents in the school district continually for 30 days preceding the election, and able to read and write the English language in accordance with an act of the United States Congress, are qualified to vote at elections in the independent school districts; provided, however, that the requirement as to ability to read and write shall not apply to any person who is incapacitated from complying by reasons of physical disability alone.

Applications for teaching positions should be directed to the clerk of the school board of the city in which employment is desired.

Incorporated School Districts

Incorporated school districts are established in any town, village or settlement outside the limits of an incorporated town or independent school district that has a population of 100 or more, and where at least 30 children between the ages of 6 and 17 years reside; provided that such school districts do not embrace more than 500 square miles. These districts are established by the judge of the district court upon petition of not less than 30 citizens of the United States, or persons who have declared their intentions to become such, over the age of 21 years, who are residents of the proposed school district, and a subsequent approving election. Schools in incorporated districts are managed by a school board of 5 persons who are elected in a manner similar to board members in incorporated cities and have similar powers, but with additional powers to levy and collect taxes upon real and personal property in the school district. These taxes are used exclusively for the maintenance of schools within the district.

Applications for teaching positions should be directed to the clerk of the school board of the town in which employment is desired.

Unincorporated Schools

Schools outside the limits of incorporated cities, independent school districts, and incorporated school districts are established by the Commissioner of Education with the consent of the Territorial Board of Education. The affairs of these schools are administered through the office of the Commissioner of Education.

Applications for teaching positions in these schools should be directed to the Office of the Commissioner of Education, Juneau, Alaska.

Accredited Schools

The public high schools at Anchorage, Cordova, Douglas, Eielson Air Force Base, Fairbanks, Juneau, Ketchikan, Kodiak, Kodiak Naval Station, Nome, Palmer, Petersburg, Seward, Sitka, Skagway, Wrangell, the Sheldon Jackson School at Sitka, and the Mt. Edgecumbe Vocational School (Bureau of Indian Affairs) are on the accredited list of the Northwest Association of Secondary and Higher Schools. High schools accredited by the Territorial Department of Education include those located at Haines, Nenana, and Valdez, as well as those maintained in connection with a number of rural schools.

APPROPRIATIONS

The Territorial public schools are supported largely by appropriations from the Territorial treasurer. The Territory reimburses the incorporated schools from 75 to 85 percent of their current operating expenses, depending upon the enrollment. Schools outside incorporated districts are supported entirely by appropriations made by the Legislature; these funds are distributed through the Office of the Commissioner of Education. All school transportation is supported 100 percent by Territorial funds.

TEACHERS AND SALARIES

Teachers in the Territorial public schools compare favorably in training and experience with those in the States. All teachers in public schools must be citizens of the United States and must meet the certification requirements. Teachers who have completed 3 years (90 semester or 135 quarter hours) in an accredited normal school, college, or university and shall have completed at least 16 semester or 24 quarter hours in education may be issued a certificate valid for 3 years. A teacher who has received a bachelor's degree from an accredited university or college and who has completed at least 16 semester or 24 quarter hours in education may be issued a certificate for 5 years. A superintendent of schools having 4 or more teachers may be granted an administrative certificate provided he meets training and experience requirements.

Salaries of Teachers in Alaska—Effective July 1, 1957

FIRST JUDICIAL DIVISION

Public School Experience in Alaska	3 Years Training	Bachelor's Degree	Master's Degree
None	$4,500	$4,650	$4,800
1	4,625	4,800	4,975
2	4,750	4,950	5,150
3	4,875	5,100	5,325
4	5,000	5,250	5,500
5		5,400	5,675
6		5,550	5,850
7		5,700	6,025
8		5,850	6,200
9			6,375
10			6,550
11			6,725
12			6,900

THIRD JUDICIAL DIVISION

$400 added to each step of First Division Scale.

SECOND AND FOURTH DIVISIONS AND THAT PORTION OF THIRD DIVISION LYING WEST OF 152° WEST LONGITUDE

$700 added to each step of First Division Scale.

Principals, Vice-Principals, Head Teachers and Teachers-in-charge

ALL JUDICIAL DIVISIONS

Principals..... $600 above Teachers' Scale
Vice-Principals..... $300 above Teachers' Scale
Head Teachers..... $300 above Teachers' Scale
Teachers-in-charge..... $150 above Teachers' Scale

The University of Alaska

The University of Alaska, one of the 69 land-grant colleges established by the United States Congress, is on a 2,250-acre tract at College, a community approximately 4 miles west of Fairbanks. Regular bus service is maintained between Fairbanks and the University.

The University boasts a rapidly growing physical plant which includes

modern men's and women's dormitories which overlook the mighty, snow-crowned Alaskan Range of mountains in the distance. Increasing numbers of non-Alaskans are going to the University.

Some of the most outstanding buildings are the Brooks Memorial Mines Building, the Student Union and the Geophysical Institute. This latter building, the first earthquake-proof structure in Alaska, cost approximately a million dollars. The purpose of the institute is to advance knowledge in the broad field of physics of the earth and to emphasize geophysics as it is related to the Arctic. Available at the institute are some of the finest facilities in the world for studying the Arctic, the stratosphere and regions beyond.

Regular four-year courses are offered in Agriculture, Arts and Letters, Biological Science, Business Administration, Chemistry, Civil Engineering, Education, Electrical Engineering, General Science, Geophysics, Home Economics, Mining Engineering, Geological Engineering, Metallurgical Engineering, Geology, Physics, and Wildlife Management. All these courses lead to the various bachelor's degrees.

In civil, mining, and metallurgical engineering and in geology, students have an option of four-year courses leading to bachelor's degrees, or five-year courses leading to either bachelor's or professional degrees. Pre-medical, pre-dental and pre-nursing work also is offered. Graduate degrees also are offered by various departments.

The Department of Civil Engineering and the School of Mines, mining engineering and geological curricula are fully accredited by the Engineers Council for Professional Development. Hundreds of persons throughout the Territory each year receive mining short courses.

This work in mining extension is designed to give basic training in various phases of geology and mining as a service to those who are unable to take up resident study at the University.

The University also boasts community colleges in Anchorage, Ketchikan and Juneau. In addition, the Military Branches office offers fully accredited courses at the various military bases in the Territory.

Cooperative Agricultural Extension Service

The Extension Service of the University of Alaska was established in 1930 and performs an extremely important service to the people of the Territory. This Service assists men, women, and children in the home, on the land, and in improving living conditions generally. All parts of the Territory, rural communities as well as the larger towns, are reached with the Service's demonstrations which include 4-H Club work, home demonstration work, and agricultural subjects. Home demonstration offices are maintained at Fairbanks, Palmer, Anchorage, Juneau, Homer, and Ketchikan.

UNIVERSITY OF ALASKA.

Financial support is given the Extension Service by the Territory of Alaska and by the United States Department of Agriculture, cooperatively. The total annual budget is slightly under $200,000. Headquarters of the Service is on the campus of the University of Alaska at College.

Agencies cooperating with the Service are the United States Soil Conservation Service, United States Farm and Home Administration, Federal Land Office, United States Forest Service, Territorial Department of Agriculture, Agricultural Commodity Stabilization Service, and other organizations interested in the development of farming and rural life.

Bulletins and informational material pertaining to agriculture and rural life in Alaska are furnished to interested persons. Special efforts are made to reach all homesteaders as soon as they take up work on the land.

Agricultural Experiment Stations

The Agricultural Experiment Stations of the University of Alaska are at Fairbanks, Matanuska, and Petersburg. Under an agreement between the University and the Agricultural Research Administration of the United States Department of Agriculture, the facilities of the Federal Experiment Station at Palmer and those of the University Experiment Stations are available jointly for a comprehensive research program in agriculture. This agreement is on much the same basis as that now being carried out with other land-grant institutions.

Cooperative Wildlife Research

The University of Alaska, Alaska Game Commission, Fish and Wildlife Service, and Wildlife Management Institute have combined their resources in a project to teach wildlife management and research. The main part of the research work is done by candidates for the master's degree at the University in wildlife management. A limited amount of financial help is available for well qualified graduate students.

Information

For further information, inquiries should be addressed, air mail, to the Registrar, University of Alaska, College, Alaska.

Schools Maintained by Bureau of Indian Affairs

An estimated 12,100 native children are of school age. Approximately 5,460 of these children attend Territorial schools. The Bureau of Indian Affairs maintains about 84 community day schools in native villages throughout the Territory. Many of the children come to these schools without knowledge of the English language or familiarity with non-native cultural customs. In addition to a curriculum, similar to that of the Territorial public schools, emphasis is placed on teaching beginners English and familiarizing them with American ways of life. These schools are outside incorporated towns, mostly in the Aleutian, interior, and Arctic regions. The enrollment is approximately 4,200.

The Bureau of Indian Affairs schools maintain a nutrition program which has contributed materially to improved child health. Food, supplemental to the native diet, is served daily for breakfast or lunch and the resulting general health improvement is at least a partial protection against tuberculosis.

Due to the isolation and small population of Alaska villages, the Bureau day-school teachers necessarily perform many services not ordinarily considered part of a teacher's duties. Often they represent the Bureau of Indian Affairs or Territorial Department of Public Welfare in the administration of general assistance, old-age assistance, aid to the blind, and aid to dependent children. In a number of villages the school teacher serves as postmaster. In communities where native-owned cooperative stores are operated, the school teacher is called upon to assist the native storekeeper in establishing and maintaining an adequate accounting system for his business.

In isolated areas the teacher also serves as radiotelephone operator, as the Bureau maintains and operates radio transmitters in many of its schools where no other radio communication is available. All these stations communicate on regular schedule with the nearest Alaska Communication System station.

At times, the teacher is called upon to give first aid, assist people during epidemics, and render many other kinds of service.

Because of the many and varied duties, isolation, and quarters limitations, husband and wife teams are given preference for employment. In a few two-teacher schools both husband and wife, if qualified, can be employed as teachers. As most of the schools are one-teacher schools, the husband or wife of the teacher is usually employed as an assistant at a salary about two-thirds of that paid the teacher.

Teachers for schools maintained by the Bureau of Indian Affairs are selected through civil service examinations and from registers maintained by the Civil Service Commission, Eleventh Regional Office, Seattle, Washington. Salaries start at $3,670 without experience and $4,525 with experience, to which is added a 25 percent differential. A bachelor's degree, with a minimum of 24 hours of specialization in education, is required for elementary teachers. Further information regarding examinations may be obtained from any first- or second-class United States Post Office or by writing the Area Director, Juneau Area Office, Bureau of Indian Affairs, Juneau, Alaska.

BOARDING SCHOOLS

In addition to the community day schools, the Bureau of Indian Affairs maintains two boarding schools. One of these, Mt. Edgecumbe, near Sitka, is a high school, drawing enrollment from the entire Territory. Vocational and college preparatory courses are offered. Approximately 700 pupils are enrolled. Wrangell Institute, in southeastern Alaska, is an elementary boarding school with an enrollment of 150 dependent children from all parts of the Territory.

Museums and Libraries

The Alaska Historical Library and Museum in Juneau contains the famous Neuman Eskimo Exhibit. On display are relics from the days of the Russian occupation, exhibits of Attu basketry, jade artifacts, minerals, and modern fine art. The library of more than 15,000 volumes of Alaskana, many of them exceedingly rare, incorporates the famous Wickersham collection (the most extensive collection of books, documents, and manuscripts relating to Alaska in the United States). It is operated as a Territorial institution.

The Sheldon Jackson Museum at the Sheldon Jackson School in Sitka, has a fine collection of Russian material reminiscent of their tenure, as well as a remarkable collection of aboriginal artifacts.

The University of Alaska at College maintains a museum which displays Eskimo craftwork and material of historical importance. The collections of native and other artifacts, estimated at more than 75,000 specimens, is so large that it cannot be exhibited on the museum's limited floor space. The library maintained by the University contains more than 20,000 bound volumes and approximately 20,000 bulletins and pamphlets.

Employment

THE UNITED STATES GOVERNMENT is the largest employer in Alaska with the construction industry employing the next largest number of workers. The other major industries are fishing and fish processing, transportation, mining, lumbering and pulp, and trade and services. Government employment is mostly stable year-round employment with only a small proportion of seasonal workers. The construction industry is seasonal with the largest number of workers employed during the summer months. The fishing and fish processing industry is highly seasonal. There is some fishing activity in Alaska during most of the summer months but the fishing season in any one area is usually very short. Placer gold mining employs the major portion of those employed in the mining industry and all work is done during the summer. Employment in the lumbering and pulp industry fluctuates somewhat due to weather conditions, but stable year-round employment is provided for most of the workers. Transportation, trade and service provide fairly steady year-round employment with only minor fluctuations due to seasonal factors.

There is usually a surplus of unskilled workers in most areas in Alaska so that unskilled migrant job seekers often have difficulty finding work. Skilled workers have a better opportunity of employment but prospects vary widely between different crafts and at different times of year. The best employment opportunities for men are in the classifications of civil engineer, electronic engineer and electronic technician. Shortages in other occupational classifications develop at times but usually are for a limited number of persons or exist only for a short time.

Most employers now recruit needed personnel from within Alaska either through their own personnel office, the Alaska Territorial Employment Service or the different labor unions. When workers are

not available in Alaska they are recruited in the States and transportation is sometimes paid. Wages are generally higher than in the States and vary substantially from one part of Alaska to the other in keeping with the cost of living and labor supply.

Employment opportunities for women are limited except in certain fields. The fish and shellfish canneries employ women workers and some are employed in trade and service, but other industries in Alaska employ very few women except in office work. A large number of women office workers is required by the large government installations. There is a steady demand for fully qualified stenographers and secretaries and a somewhat lesser demand for clerk-typists, bookkeepers and other office workers.

Persons going to Alaska to seek work should make inquiry regarding employment possibilities in which they are interested and if possible have definite employment prospects before making the trip. Anyone going to Alaska without a definite job should have funds sufficient to maintain himself for several weeks while looking for work and a reserve to pay his return transportation if unsuccessful. He should also keep in mind that during the winter months there are large numbers of unemployed seasonal workers in Alaska who are available for other types of work. Seeking employment in the Territory is much the same as looking for work in any other area. Alaska is not a "Utopia" with a job for all comers but there is often employment opportunity for competent workmen in needed classifications.

Civil Service

Most Federal positions in Alaska were brought under the competitive civil service system in August of 1955, by action of the Civil Service Commission, although positions with the Alaska Railroad and some positions in other agencies remain in the excepted service. As a result of the Commission's action, most Federal employees in Alaska now enjoy the full benefits of the career-conditional appointment system, including the opportunity to attain job status and certain tenure rights.

In order to promote the competitive civil service system in Alaska, several Federal agencies in the Territory have established boards of civil service examiners. In Juneau, the Department of the Interior spearheaded this development by organizing a board which actively recruits and examines applicants for Federal positions. Boards are also located in Anchorage and at Ladd Air Force Base, Fairbanks.

The Civil Service Commission's Eleventh Regional Office in Seattle has jurisdiction over civil service affairs in Alaska, and administers them through its branch office in Anchorage. Information on civil service matters may be obtained from the Manager, Branch Regional Office, Eleventh U. S. Civil Service Region, P. O. Box 135, Anchorage, Alaska.

Fishing Industry

A central employment agency for cannery workers does not exist in the States or in Alaska. Each cannery does its own hiring, usually in Seattle, from about January to May of each year. Letters of application, giving age, physical condition, training, working experience, and any other qualifications, should be sent to the individual company. A list of salmon canners may be obtained from the Regional Director, Bureau of Commercial Fisheries, Juneau, Alaska.

Employment in fishing operations on vessels usually is obtained by personal interview with the captain of each individual fishing vessel or, in the case of company-owned boats, with the individual company. Information concerning employment in cold storage plants, herring-reduction plants, and other branches of Alaska's fisheries is contained in other pamphlets which may be obtained from the Bureau of Commercial Fisheries, Juneau, Alaska.

Shoreworkers and fishermen in Alaska are highly unionized and wages and fish prices in the case of company fishermen are adjusted annually by negotiation with the operators.

Department of the Interior

Fish and Wildlife Service

Occasional opportunities appear in the Fish and Wildlife Service, Department of the Interior, for airplane pilots and mechanics; masters, mates, marine engineers, and quartermasters, technologists, chemists, bacteriologists, and laboratory aids; seasonal positions of seamen, cook (on vessels or at shore work camps), radio operators, biological aids, stream guards, enforcement patrolmen, and fishery aids. Further information may be obtained from the Regional Director, Bureau of Commercial Fisheries, Juneau, Alaska.

Inquiries concerning positions in the Pribilof Islands as school teachers and seasonal positions as mechanics, carpenters, and cooks

should be directed to the General Manager, Pribilof Islands, United States Department of the Interior, 706 Federal Building, Seattle 4, Washington.

Bureau of Indian Affairs

This Bureau employs dietitians, teachers, social workers, stenographers, general clerical and administrative personnel, mechanics, and cooks for duty in Alaska. Information concerning employment in these positions may be obtained from the Area Director, Juneau Area Office, Bureau of Indian Affairs, Juneau, Alaska.

Bureau of Land Management

Openings in Alaska for foresters, agricultural economists (land), and cadastral engineers, as well as clerks, occur occasionally. Also, a limited number of seasonal positions are available during the summer months for forestery aids, survey and cartographic aids, and others. Inquiries should be directed to the Area Administrator, Bureau of Land Management, Box 1481, Juneau, Alaska.

U. S. Geological Survey

Professional employees, such as geologists and engineers, of the Geological Survey who work in Alaska, are obtained through regular Civil Service procedures. The Survey employs a limited number of temporary field personnel for seasonal work in Alaska in field parties. Preference for those positions is given to residents of Alaska. Inquiries regarding such employment may be addressed to Geological Survey offices in Fairbanks, Juneau, Anchorage and Palmer, Alaska, or to the Personnel Officer, U. S. Geological Survey, Washington 25, D. C.

Bureau of Mines

Positions with this Bureau in Alaska usually are for mining engineers, research metallurgists (ore dressing), chemists, and mineral statisticians. Applications should be sent to the Assistant Regional Director for Alaska, Bureau of Mines, P. O. Box 2688, Juneau, Alaska.

National Park Service

Inquiries concerning employment opportunities with the National Park Service in Alaska should be directed to the Regional Director, Region Four, National Park Service, 180 New Montgomery Street, San Francisco, California.

Operation of the Eklutna hydroelectric power project near Anchorage is under the direction of the District Manager. Applications for work should be directed to the District Manager, Bureau of Reclamation, Juneau, Alaska, from whom information concerning other positions with the Bureau of Reclamation in the Territory may be obtained.

Department of the Army

Openings for civilian employment in Alaska with the Department of the Army occur in the Corps of Engineers. Information concerning openings in trades positions will be furnished by the Civilian Personnel Division, Corps of Engineers, Gravelly Point, Washington 25, D. C., upon request. Inquiries as to positions in an engineering capacity should be addressed to the Division Engineer, Corps of Engineers, 210 Custom House, Portland 9, Oregon.

The Department of the Army frequently has openings for civilians in Alaska to serve as clerk-stenographers, clerk-typist, auditors, accountants, property and supply clerks, supervisors, and administrative personnel. It is necessary for the individual to be qualified by actual experience in the work for which applying. Applications, Standard Form 57, should be forwarded to the Overseas Affairs Division, OCP, DCSPER, Department of the Army, Old Post Office Bldg., 12th and Pennsylvania Ave., NW., Washington 25, D. C.

If you live in the Pacific Coast region, send your application to Overseas Affairs Division, OCP, DCSPER, Department of the Army, 555 Battery Street, San Francisco 11, California.

Department of the Navy

Applications for civilian positions with the Department of the Navy in Alaska should be sent to the Navy Overseas Employment Office (Alaska), Headquarters Thirteenth Naval District, Seattle, Washington.

Department of the Air Force

Persons interested in civilian employment in Alaska with the Department of the Air Force should contact either the civilian recruiting

office of the nearest air force base or submit a completed application, Standard Form 57, to the Overseas Employment Branch, Directorate of Civilian Personnel, Headquarters, U. S. A. F., Washington 25, D. C.

Additional Information

Additional opportunities for employment may occur in industry and in Federal or Territorial Government for which applications may be filed with the agencies listed. Correspondence should include complete data regarding experience and qualifications of applicant and should be sent to Alaska by airmail. Applicants, including veterans, should contact the following agencies:

All types of employment.—Alaska Territorial Employment Service—offices at: Juneau, Anchorage, Fairbanks, Ketchikan, and Petersburg.

Accountancy.—Board of Accountancy, Juneau.

Aviation.—Regional Administrator, Civil Aeronautics Administration, P. O. Box 440, Anchorage.

Chiropractic.—Board of Chiropractic Examiners, Juneau.

Cosmetology.—Board of Cosmetology, Juneau.

Dentistry.—Board of Dental Examiners, Juneau.

Engineering or Architecture.—Board of Engineers' and Architects' Examiners, Juneau.

Forestry.—The Regional Forester, Juneau. (Also see Bureau of Land Management.)

Law.—Office of the Attorney General, Juneau.

Medical and Public Health.—Alaska Department of Health, Juneau; Board of Medical Examiners, Juneau. U. S. Public Health Service, Dept. of Health, Education, and Welfare, Washington 25, D. C.

Mining.—Territorial Department of Mines, Juneau.

Optometry.—Board of Optometry, Juneau.

Pharmacy.—Board of Pharmacy, Seward.

Railroading and Maintenance.—The General Manager, The Alaska Railroad, Anchorage.

Road Construction and Maintenance.—Regional Engineer, Region 10, Bureau of Public Roads, Juneau.

Teaching.—University of Alaska, College, Alaska; Territorial Commissioner of Education, Juneau; Area Director, Bureau of Indian Affairs, Juneau; (also see Educational System).

Health

THE TERRITORIAL GOVERNMENT, through its agency, the Alaska Department of Health, and the Federal Government, through the United States Public Health Service, cooperate in preventing disease and in providing health services and facilities to the people in Alaska.

Public Law 830, 84th Congress, the Alaska Mental Health Enabling Act, provided for the transfer from the Federal Government to the Territory of Alaska of the responsibilities relating to the care and treatment of the mentally ill from Alaska. This transfer became effective on February 23, 1957. An act of Congress on January 27, 1905, had placed the care of Alaska's mentally ill under the direction of the Secretary of the Interior. This program was administered by the Department of the Interior from that time until the transfer date to the Territory of Alaska. The 1957 Legislature enacted modernized commitment and hospitalization procedures (Chapter 87, S.L.A. 1957).

Alaska Department of Health

The Alaska Department of Health is financed with funds provided by the Territorial Legislature, supplemented by grants from the United States Public Health Service, the Children's Bureau, and local Communities and voluntary agencies. Supervision is vested in a board of health appointed by the Governor and approved by the Territorial Legislature. A commissioner of health is appointed by the board to serve as executive officer of the department.

The department is confronted with many problems and the influx and relocation of civilian population caused by World War II, as well as additional military personnel, have thrown an extra load on already

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over-crowded facilities. Water, sewerage, food-handling, housing, and communicable-disease problems have been intensified by this shifting population and by military and construction forces crowding into small civilian communities.

Laboratories

The department operates four main laboratories at Juneau, Ketchikan, Anchorage, and Fairbanks and a small laboratory on one marine unit. Services of the main laboratories include bacteriological analyses of milk and water, serological tests on bloods, blood typing, examination of specimens for tuberculosis, venereal diseases, and other diseases that may require laboratory aid for diagnosis.

One marine unit, the *M/S Hygiene,* operates along Alaska's coast in the Kodiak Island, Alaska Peninsula and Bering Sea areas, travelling as far north as Unalakleet. Services offered board the *M/S Hygiene* include maternal and child hygiene, tuberculosis control, communicable and venereal disease control, care of crippled children, nursing care, and dental care. A dentist on the unit teaches principles of good dental hygiene and is alleviating numerous poor dental conditions.

Tuberculosis Control

Tuberculosis remains the greatest single health hazard among the Native population in Alaska. The death rate from this disease among the Native population in Alaska is the highest in the Nation. Active cases are isolated to the extent of available facilities. In addition to hospitals in Alaska, beds have been made available for hospitalizing Alaska patients in Washington state sanatoria. Although there is a waiting list for Native patients due to shortage of funds, Territorial beneficiaries are hospitalized without delay. Close contact is kept with field nurses and case registers are maintained in Anchorage and Juneau of all known persons with active tuberculosis. Chemotherapy and BCG vaccine are widely used.

Public Health Nursing

Throughout Alaska public health nursing service is provided, to the extent of available personnel, for expectant mothers; infants; preschool, school, and crippled children; and for communicable disease, tuberculosis, venereal disease, mental hygiene, and morbidity cases.

In each community or area where public health nursing service is provided a community health council is composed of interested local citizens.

Financially, all public health nursing services are supported jointly by the Alaska Department of Health and the community or area to which the nurse is assigned. All health centers are maintained by the local communities. Public health nurses are assigned to health centers in the following localities: Anchorage, Anchorage area, Angoon-Kake, Barrow area, Bethel area, Cordova, Craig-Hydaburg-Klawock, Dillingham area, Fairbanks, Fairbanks area, Glenallen area, Haines-Skagway-Klukwan, Juneau, Kenai area, Ketchikan, Kodiak, Kodiak Island, Kotzebue area, Naknek area, Nome, Nome area, Nulato area, Palmer, Petersburg, Seward, Sitka, St. Lawrence Island, Tok area, Unalakleet area, Yakutat-Hoonah-Pelican.

Many other services are offered by the Health Department, including sanitation and engineering, health education, medical facilities, and medical social services.

Vital Statistics

One of the greatest problems of the department is obtaining complete reports of all births, deaths, stillbirths, and marriages from widely scattered and isolated villages. To aid in this work the nineteenth session of the Territorial Legislature transferred the Bureau of Vital Statistics from the Territorial Auditor's Office to the Department of Health, effective April 1, 1949. The United States Commissioners in Alaska act as local registrars for the collection of these data.

Health Services Provided the Natives

The Federal Government provides health and medical services for Alaska Natives on essentially the same basis that these services are rendered to Indians who live on reservations within the continental United States. In Alaska, Federal health services for the native population date from 1912, when an appropriation was made for this purpose and a nurse was appointed to survey health needs and provide services to Eskimos, Indians, and Aleuts in southeastern Alaska. Subsequently, a director of health was detailed to Alaska by the United States Public Health Service. The first permanent Federal hospital for Alaska Natives was opened at Juneau in 1915.

Between 1931 and July 1955 health services for Alaska Natives were provided by the Bureau of Indian Affairs, Department of the Interior. By 1955, hospitals were being operated by the Bureau's Alaska Native Service at Barrow, Bethel, Juneau, Kanakanak, Kotzebue, Tanana, Anchorage, and Mt. Edgecumbe.

On July 1, 1955 the Federal Government's Indian health program was transferred to the Public Health Service, Department of Health, Education, and Welfare, in accordance with Public Law 568, 83d Congress. The Public Health Service constituted the Alaska Native Service as a part of its Division of Indian Health.

The eight hospitals of the Alaska Native Health Service have a combined total of more than 1,000 beds, of which about 650 are for tuberculous patients. There are not enough beds in the Alaska Native hospitals to meet the needs of the unusually high number of tuberculous patients and of some general patients in communities remote from medical facilities. To serve these people, the Public Health Service contracts with community hospitals and sanatoria in the Territory for about 25 general beds and for more than 100 beds for tuberculous patients, as well as for about 300 beds in three sanatoria in the State of Washington. Native tuberculous patients are transported by air to these hospitals in Washington.

Tuberculosis is still a major health problem in the Alaska Native population. In 1954 the known case rate was 245.6 cases for every 10,000 in the Native population. In contrast, in the same year, the number of cases in the Indian population in the United States was 56 per 10,000 and 6.2 cases in the non-Indian population. Although mortality from tuberculosis is exceedingly high among Alaska Natives, it has been declining steadily, dropping from a rate of 67.3 per 10,000 population in 1950 to 31.5 in 1953.

To bring tuberculosis under more effective control in Alaska, the Alaska Native Health Service in 1954 instituted a program providing for home treatment of many Alaska Natives who can be treated without hospital care. This undertaking, known as the "ambulatory chemotherapy program," involves the use of the latest drugs effective in healing and in preventing the spread of tuberculosis. One of these is isoniazid, which is the most effective drug for this purpose yet known.

For a number of years the Bureau of Indian Affairs had contracted with the Alaska Department of Health for public health nursing services to the native population. This contractual arrangement has been continued and expanded since the transfer of the program to the Public Health Service. The current contract provides for public health nursing services, medical care, tuberculosis control, and sanitation and health education services to the Alaska Native population. Under this contract, native sanitarian aides are being trained to promote adoption of sanitary procedures by their people. These sanitarian aides are employed in the Alaska Native Health program.

The Public Health Service operates a nationally accredited practical nurse training school at Mt. Edgecumbe, in which about 40 Alaska Native girls a year receive training. Graduates of this school are em-

ployed in the hospitals and other health facilities of the Alaska Native Health Service.

Health services also include nursing services on an itinerant basis to natives in remote villages. This fundamental public health nursing program, which reaches 113 villages, is similar to that offered whites except that adaptations are made in accordance with the needs of the people. In general, all services to the natives are designed for the people served and to reach natives who live in unincorporated villages and rural areas. Those living in larger towns depend for services upon the same Territorial agencies that serve the entire population.

Hospitals Maintained in Alaska

Location	Name of hospital	Type of service	Beds	Bassinets	Operator
Anchorage	Alaska Native Health Service	General	400	10	Federal
Anchorage	Providence	..do	90	20	Catholic
Barrow	Alaska Native Health Service	..do	16	4	Federal
Bartlett	Seward Sanatorium	Tuberculosis	155	....	Methodist
Bethel	Alaska Native Health Service	General	71	10	Federal
Cordova	Cordova General	..do	22	3	Community
Fairbanks	St. Joseph's	..do	96	15	Catholic
Fort Yukon	Hudson Stuck Memorial	..do	28	2	Episcopal
Juneau	St. Ann's	..do	94	12	Catholic
Do	Alaska Native Health Service	..do	54	5	Federal
Kanakanak	..do	..do	51	5	Do
Ketchikan	Ketchikan General	..do	75	20	Catholic
Kodiak	Griffin Memorial	..do	19	6	Do
Kotzebue	Alaska Native Health Service	..do	40	2	Federal
Mt. Edgecumbe	..do	..do	342	5	Do
Nome	Maynard-McDougal	..do	25	4	Methodist
Palmer	Valley Hospital	..do	27	6	Community
Petersburg	Petersburg General	..do	12	1	Do
Seldovia	Seldovia General	..do	5	3	Do
Seward	Seward General	..do	30	5	Methodist
Sitka	Alaska Pioneer's Home	..do	41	....	Territorial
Skagway	White Pass Yukon	..do	10	4	White Pass Yukon Railroad
St. Paul Island	St. Paul Island	..do	8	3	Federal
St. George Island	St. George Island	..do	6	....	Do
Tanana	Alaska Native Health Service	..do	32	5	Do
Valdez	Valdez General	..do	12	3	Community
Wrangell	Bishop Rowe General	..do	12	5	Episcopal

Industries, and Resources

ALASKA'S LAND OF VAST DISTANCES and varied resources offer great opportunities in many fields. Although opportunities for commercial enterprises exist, some of the disadvantages of frontier conditions are evident and a thorough study should be made "on the ground" just as in establishing a new business in any other part of the Nation. Courage, imagination, and work will play a great part in the development of opportunity and of Alaska itself. Obviously, as Alaska's latent resources are developed, opportunities are opened for other investments, small business, services and trades, employment in all fields, and professional work.

Numerous government agencies, Territorial and Federal, are planning programs and assisting in the development of the Territory, one of which is the Alaska Public Works Program. This program was authorized by the Congress on August 24, 1949, to foster the settlement of a greater number of permanent residents in Alaska, stimulate trade and industry, encourage internal commerce and private investment, develop Alaska's resources, and provide facilities for community life. The act authorizes the construction of schools, hospitals, sewer, water and other public utility facilities, college and institutional buildings and facilities, libraries, firehouses, and other public buildings. Authorized as a 5-year program, the total cost is estimated at $70,000,000. This program has been extended to June 30, 1959.

An agency to aid in the development of the Territory is the Alaska Resource Development Board, created by the Territorial Legislature in 1945. This board cooperates with the several Federal Departments and agencies operating in Alaska in the preparation of plans for promotional and developmental activities. Major efforts are made by the

board to attract large basic industries to Alaska, expand the use of industrial, agricultural, recreational and economic resources, present a true picture of Alaska's resources and development possibilities, and furnish current information and publications on industrial and business opportunities and all fields of development. Publications may be purchased from the board covering trade, industry, farming, livestock raising, recreation, fur farming, forest industries, merchandising conditions, electric power, and tourist lodge development possibilities. Inquiries should be directed to the Alaska Resource Development Board, P. O. Box 50, Juneau, Alaska.

Another agency originated to encourage the development of the tourist industry is the Alaska Visitors Association, a nonprofit corporation created by the 1951 Legislature. An office is maintained at Juneau and inquiries should be directed to the Executive Director.

The 1955 Territorial Legislature created the Alaska Rural Development Board to coordinate existing programs of the Territorial Government and to plan, inaugurate and operate additional programs for the purpose of promoting the improvement of the health, welfare, security and economic well-being of Alaskans residing in rural and remote areas of the Territory.

Many industries and resources in the Territory invite development: the tourist trade, transportation, fisheries, mining, timber, power, agriculture, fur farming, and other phases of industry.

Fisheries

The principal industry of Alaska is catching and processing fish. During the early days the fisheries were under the jurisdiction of the Treasury Department; later the Commerce Department took them over until 1940, when the Bureau of Fisheries was consolidated with the Biological Survey into the Fish and Wildlife Service under the United States Department of the Interior.

This industry forms the basis of Alaska's wealth and is an important source of revenue-producing income. The total wholesale value of fisheries products prepared for market since Alaska was purchased by the United States in 1867 passed the 2 billion dollar mark in 1950; a sizable figure when compared with the purchase price of $7,200,000 for the Territory. The value of products annually prepared for market averages in the neighborhood of $90,000,000, with a return estimated at $28,000,000 to the fishermen for the unprocessed fish. The 1956 production was 226,357,141 pounds, valued at $92,960,379 wholesale. Of the numerous fisheries, the salmon take is by far the largest, ac-

counting for approximately 90 percent of the value. Other fish taken are halibut, herring, sablefish, clams, crabs, shrimp, and cod, in the order of their importance. The industry serves as the source of livelihood for approximately 30,000 people engaged in fishing in Alaska, of which approximately 40 percent are fishermen.

In 1878 the first salmon cannery was built in the Territory and expansion was fairly steady thereafter. Certain of the runs were thoroughly exploited by the turn of the century and it became evident that some control would have to be applied if the fisheries were to be maintained on a perpetuating basis. Congress enacted various items of legislation to control the situation, the first comprehensive one being passed in 1906. The basic law was rewritten and enlarged in 1924 with the passage of the White Act which forms the basis on which regulations are promulgated. It was evident that scientific knowledge was needed concerning the various species in order to regulate the fisheries intelligently. Biological investigations were started about that time, and are being carried on in much greater scope today. Because of the dynamic and ever-changing nature of the various species, the regulations are extensively revised annually. These regulations are promulgated by the Secretary of the Interior and administered through the Fish and Wildlife Service, United States Department of the Interior. Public hearings are held each year at various fishing ports in Alaska, as well as in Seattle, Washington, prior to promulgation of the following year's regulations.

Alaska Fish and Game Commission

In order to assist in expanding the important fisheries industry, the Territorial Legislature, in 1949, created an Alaska Department of Fisheries, and an Alaska Fisheries Board. The 1957 Legislature abolished the Department of Fisheries and Alaska Fisheries Board, replacing them with an Alaska Fish and Game Department and an Alaska Fish and Game Commission composed of 7 members.

The newly created Commission has among its powers and duties biological research, watershed improvement, fish and game rehabilitation, propagation and stocking. The Commission is also charged with predator investigation and control and is authorized to enter into cooperative agreements with educational institutions and Territorial State and Federal agencies to promote fish and game research, education and information, and the training of personnel for fish and game management. It is authorized to assist the United States Fish and Wildlife Service in the enforcement of Federal laws and regulations pertaining to fish and game, as well as to assist in the enforcement of Territorial laws dealing with fish and game, including licenses.

Alaska Fisheries Experimental Laboratory

The Alaska Fisheries Experimental Laboratory at Ketchikan was created before World War II by the Territorial Legislature for the purpose of performing essential research work and studies and making fishery technological and market information available to individuals and industries. Operations are financed by money allocated by the Territorial Legislature and by funds contributed by the Federal Government through the Fish and Wildlife Service, Department of the Interior.

Canneries

Approximately 85 canneries operate in Alaska, a small number of which are floating and hand-pack canneries. A great majority are modern high-speed plants using automatic machinery and requiring a large capital investment. A modern plant usually consists of from 2 to 4 canning lines, with the newest machinery capable of canning 270 one-pound cans per minute per line. Such high-speed plants are necessary because of the extremely short duration of most of the runs.

Cannery workers and fishermen are highly unionized. Wages, as well as prices paid for the fish in the case of Company fishermen are adjusted each season by negotiations and contracts between the unions and the operators.

Salmon

Five species of Pacific salmon exist and all occur in commercial quantities in Alaska. It has been found that each species has a separate and predictable life cycle and knowledge of this is taken into account by the industry in planning its fishing operations as well as by the Fish and Wildlife Service in regulating and controlling the fisheries.

A few salmon are marketed fresh, frozen, mild cured, and salted. The major portion is canned. When canned, the five species of salmon vary in value because of differences in color, oil content, and other items. As a result, each species is required by law to be identified on the can. The most valuable are the reds, followed in order of value by the kings, cohoes, pinks, and chums. In order of quantities taken, pinks are first, reds second, chums third, cohoes fourth, and kings last. They are taken by traps, purse seines, gill nets, beach seines, and trolling.

The catch of salmon in 1956 by all forms of gear totaled 49,284,948 fish, of which 25,537,800 were pinks, 14,605,087 reds, 7,201,125 chums, 1,482,913 cohos, and 458,032 kings. The output of canned salmon, in standard cases of 48 one-pound cans, totaled 2,962,193 cases valued at $76,919,415.

In addition to the salmon taken for commercial purposes, large numbers are caught each year for personal use and to be dried for dog feed. King and coho salmon furnish a favorite form of sport fishing. This sport has grown rapidly and is a major attraction to the tourists during the spring and summer months.

Herring

In Alaska commercial fishing for herring started with the construction of a reduction plant in 1882. This plant remained the only establishment of its kind in Alaska until 1919, at which time the Bureau of Fisheries, one of the parent organizations of the Fish and Wildlife Service, introduced the Scotch method of curing herring for human consumption.

A rapid rise in the herring fisheries followed. By 1925 the fisheries had grown so large that over-fishing made it necessary to impose rather drastic fishing controls and, at the same time, start scientific investigations on which to base controls. The various herring fisheries now have established quotas and these are adjusted from time to time as conditions warrant. Three principal fisheries, each with a separate quota, are in southeastern Alaska, Prince William Sound, and at Kodiak Island.

In Alaska the taking and curing of herring for human consumption declined rapidly in the late 1920's and this branch of the industry has not assumed sizable proportions since. This has been true of a number of fisheries when salting was the method of preservation and has been occasioned largely by the lack of public demand as compared with canned, fresh, or frozen fish. Consequently, the herring taken today are used for reduction purposes in the manufacture of oil and meal, with the exception of a small quantity taken for bait. Approximately a dozen reduction plants operate in Alaska and normally contract for four fishing boats each. Unless additional populations of herring are discovered in other areas, little likelihood exists for any sizable expansion in the herring fisheries.

Products of this industry for two years were as follows:

		1954	*1955*
Herring for bait	pounds	3,594,618	6,340,685
Herring meal	do	4,857,627	8,938,501
Herring oil	gallons	534,969	1,032,790

Halibut

The halibut fisheries followed much the same pattern in Alaska as the other fisheries, expanding rapidly from 1910 until about 1930. By that time fishing had become so intense that severe restrictions had to

be imposed on taking halibut in order to restore the depleted stocks. The principal fishing grounds for halibut are in the Gulf of Alaska and the species is fished as far west as Unimak Pass. As the major portion of the fisheries is not near shore lines, it was necessary to effect a convention between Canada and the United States in order to provide proper controls. The International Pacific Halibut Commission was established by that convention and a series of investigations into the life history of the species was conducted immediately. Quotas were established at a severely low level in order to replenish the stocks. This was accomplished by the late 1930's and the fisheries are stabilized on a sustained yield basis with a total quota in the neighborhood of 60,000,000 pounds, which are landed at Alaska, British Columbia, or Washington State ports.

Attempts were made to can halibut as early as 1906 but these were not successful for technical reasons. These difficulties have been overcome in recent years, but the canned product never has been able to compete with the halibut marketed fresh or frozen. In addition to the fresh or frozen fish, a market opened in 1932 for halibut livers and viscera to be used for reduction into vitamin oils. Development of this market was successful and now all halibut livers and viscera are utilized for this purpose.

In 1956, 32 firms handled a total of 25,603,465 pounds of fresh and frozen halibut, cheeks, livers, and viscera with a combined value of $5,246,141.

Cod

Cod occur in commercial quantities in a limited way around Kodiak Island and are found in extensive quantities in the Bering Sea. In earlier years sizable quantities were taken and landed at Pacific coast ports. At the present time only a limited quantity is taken each year and salted for market. The fisheries could stand far greater exploitation except that the market demand is such that only limited quantities can be sold successfully. Undoubtedly, this industry will expand in the future when demand increases and better marketing methods are developed so that Alaska cod can compete with the well-established Atlantic coast fisheries.

Smelt

Smelt are found in limited quantities throughout Territorial waters. Small runs of the eulachon occur in most of the larger coastal streams. They are not taken for commercial purposes except in limited quantities and probably will form the basis of minor fisheries in the future. These fish always have formed a basis for food for the natives as well as for other purposes. The present common name of candle fish came

from the early days when the natives dried these fish, inserted a wick, and used them in lieu of candles because of their high oil content.

Whaling—Marine Mammals

During early days, when whaling was a relatively successful business in the States, only four whaling stations were operated in Alaska waters. Whales are abundant in western Alaska waters, but, due to economic conditions, whaling stations are not operated today and have not been for a number of years. This fishery could be exploited when and if economic conditions permit.

In addition to whales, other marine mammals occur which could be utilized. Sea lions and harbor seals are found in large numbers in Alaska waters and are a great nuisance to the fishermen as frequently they rob fishing nets. The carcasses of these animals could be used for reduction purposes for manufacturing oil and meal, providing the hide could be utilized for leather. A profitable use has not been found for the hides, however, and sufficient profit is not found in reduction alone to warrant the operation of a plant.

Miscellaneous Species

Sablefish, rockfish, flounder, and lingood are taken incidental to halibut fishing. Certain of these species could support additional fisheries, such as the rockfish and flounder which occur throughout Alaska waters. In the Pacific Coast States these two species are normally taken by otter trawls. Such a trawl fishery does not exist in Alaska, principally because these fish are relatively low in value and the long distances from market make it uneconomical to attempt competition with the fisheries in the Pacific Coast States. These fisheries may develop in the future.

Numerous other species of fish are utilized in a minor way. These are principally sharks and skates, which are taken only for the utilization of the livers. These fisheries will expand when market demand permits.

The oyster output easily could be expanded to a much larger industry than it is at present. Oysters thrive in southeastern Alaska. Leases for oyster lands may be obtained from the Fish and Wildlife Service, Juneau, Alaska.

SHELLFISH

Clams

Butter clams occur in commercial quantities in southeastern Alaska and in certain places in central Alaska. The butter clam industry in southeastern Alaska operated in a relatively small way until stopped

recently by the Food and Drug Administration. Because of the occurrence of a toxic condition in the clams, the Administration considered them dangerous, although illness due to this cause is not known. The Fish and Wildlife Service laboratory at Ketchikan has been investigating means of alleviating this toxicity and it appears that under certain conditions the clams can be canned and be within the established tolerances. Butter clams as well as little necks occur throughout central Alaska in limited quantities and could well support small fisheries.

The razor clam fishery at Cordova is an example of a properly rehabilitated fishery and recently has been stabilized at a sustained yield of 42,000 cases of 48 half-pound cans each. Over-exploitation of this fishery in the early 1920's resulted in serious depletion by 1925. Scientific investigations were made by the Fish and Wildlife Service in order to replenish the stock. A size limit was established and a low quota maintained until late in the 1930's when the stocks had returned to near their former abundance. Later, the quota was stabilized at 42,000 cases.

Small fisheries were established on the razor clam populations in lower Cook Inlet and the mainland beaches opposite Kodiak Island. These populations are relatively small and produce annually in the neighborhood of 20,000 cases from both beaches. Razor clams are known to occur on other beaches and rather extensive beds are known on the Bering Sea side of the Alaska Peninsula, principally at Nelson Lagoon and Izembek Bay. These beaches could support expanded razor clam fisheries in the future. The principal problems to be surmounted are long distances from market and the lack of facilities such as docks and fresh water. Probably a small floating cannery operation could be conducted successfully in the area.

Alaska produced 411,488 pounds of razor clam products in 1956, valued at $545,210.

Crabs

Dungeness crabs are taken in the Wrangell-Petersburg area of southeastern Alaska and at Cordova in central Alaska. These fisheries could be expanded in a small way in the western portions of Alaska. They are found in varying abundance all along the Pacific side of the Alaska Peninsula, in the Kodiak Island area, and in part of Cook Inlet. Only a few crabs to supply the fresh market in Alaska are taken whole. The principal products are frozen or canned crab meat. Fishermen in the Cordova area find crab fishing a welcome addition to their income, as crabs usually are taken at off seasons from salmon fishing.

A total of 3,197,574 pounds of canned, cold-packed, frozen and fresh crabs, valued at $2,649,689, was produced in 1955. In 1954, 2,857,599 pounds valued at $2,994,518 was produced. Total production decreased in 1956 to 2,125,582 pounds valued at $2,010,775. A flourishing fishery on king crabs has grown up in the Bering Sea, Kodiak and Cook Inlet areas.

Shrimp

Shrimp occur throughout the Territorial waters of Alaska and are caught in southeastern Alaska near Wrangell and Petersburg. These fisheries have been conducted in a small way for a number of years and appear capable of operating indefinitely at the present size. Some commercial exploration is being done in the Ketchikan and Juneau areas in attempts to establish shrimp and crab fisheries. A limited population of shrimp is known to occur in lower Cook Inlet. This venture did not prove successful and shrimp are not fished in the area at present. Little exploratory work has been done elsewhere in Alaska to establish the size of the populations of shrimp, although they are known to occur all the way to the Arctic Ocean. Future exploration may reveal populations of sufficient size to warrant the establishment of limited fisheries.

The shrimp taken are not processed in Alaska, but are marketed either cold packed or frozen. The total production in 1956 was 715,808 pounds valued at $500,252.

Possibilities for Small Fishing Enterprises

A possibility exists that small canneries and small fresh and frozen fishing enterprises may be developed in several areas of the Territory. Exploratory fishing by the Fish and Wildlife Service in Bering Sea, for example, has revealed large concentrations of rock sole, lemon sole, yellowfin sole, starry flounder, and cod. Other investigations have indicated that the basis of an expanded shrimp fishery may be provided in southeastern Alaska. Recent studies indicate a small king crab fishery may be developed near Nome for the local market, and possibilities exist for commercial exploitation of sheefish and whitefish in the Yukon and Kotzebue areas. Small canneries for chum and pink salmon are a possibility in Unalakleet, and other smaller settlements where the salmon constitute part of the natives livelihood but the run is not large enough to support a big plant. Operations of this type would depend largely on the availability of local markets to be successful.

In most locations these small fisheries offer opportunities for supplying fish to local residents only, dependent today upon a definite existing market. It would be practical to attempt to ship fresh, frozen, or canned fish out of Alaska from only a few plants as the existence of a commercially profitable resource is in itself insufficient for the development of a commercial fishery. Adequate facilities must be available ashore before an industry can be developed which will benefit the local economy. For this reason the availability of power, fresh water, storage space, transportation, labor, and other important factors of pro-

duction and distribution must be investigated. Years of experience in an area usually is needed by those who wish to develop successfully a particular Alaska resource. A year or more residence in Alaska—with the time spent in studying the region, location of fish concentrations, production facilities, and market potentialities—is advisable before too much equipment is acquired.

Other Opportunities

In Alaska many types and many parts of fish are not utilized. Development is possible of new uses for waste products, the use of fishes unused commercially at present, and new methods of preparation and marketing.

Quick freezing may revolutionize Alaska fisheries by developing more attractive packaging, making new species available, and making old species more tasty.

The oyster industry could be developed; shipment of oysters canned and fresh to the States is feasible.

Ground fish landings could be increased and specialty products could be produced. Smoked sablefish, canned fish balls, pickled salmon and herring, and canned smoked salmon in larger quantities could be produced.

Cod, red snapper, rock cod, sole, flounders, and other bottom fishes offer a field for packaged quick freeze food.

The Fish and Wildlife Service and the Territory of Alaska operate a fishery products laboratory in Ketchikan engaged in experimenting with new ways of processing fish and fish products. An individual planning to enter the fishing industry may expect cooperation from this organization.

PUBLICATIONS

The following publications concerning fisheries in Alaska may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

Alaska Fishery and Fur-Seal Industries—Annual Statistical Digest. Price 25 cents.

Laws and Regulations for Protection of the Commercial Fisheries of Alaska—published annually. Price 20 cents.

Minerals

Mining, for many years Alaska's second largest industry, virtually ceased during World War II; since then it has not regained its former

status. However, growing world demand for metals, and the greater availability of risk capital resulting from the current surge of business prosperity have increased interest in Alaskan mineral exploration and development. Interest in prospecting has been stimulated also, by the worldwide search for uranium. The roadbuilding program in the Territory and the mineral investigation programs of the Geological Survey and the Bureau of Mines, agencies of the United States Department of the Interior, are serving and stimulating these interests. Several mineral-bearing areas formerly too remote to attract strong mining capital have been or are being brought within reach of highway transportation; the Geological Survey has expanded its topographic and mapping programs that provide basic information for mineral exploration; and the Bureau of Mines has constructed, near Juneau, an experiment station to develop metallurgical processes for treating Alaskan ores and to serve as headquarters for continuing the field investigations of strategic mineral deposits that began during World War II. During the summer, the Geological Survey provides a testing service for radioactive minerals at College, near Fairbanks; the Bureau of Mines provides a similar service throughout the year at its Juneau station.

Production thus far derived from Alaska's mines has been largely of high value, low-volume mineral products such as gold and platinum, that can be concentrated into marketable form under frontier conditions. The deposits mined at famous Kennecott copper mines in the Copper River region belonged to this class of deposit. As Alaska develops, more of its minerals will be produced for local processing and consumption and for shipment to markets outside the Territory. Gold probably will continue to be the leading mineral product, but an increased and diversified output of base metals, nonmetallic minerals, construction materials, and fuels also is expected.

Good results from mining operations reasonably may be expected in some locations, but hazards are relatively great for the individual prospector without experience and financial backing. Many parts of Alaska are difficult of access and the season for prospecting is limited to a few summer months. Although a large share of the prospecting is now carried on by the larger mining companies and affiliates organized specifically for that purpose, energetic and intelligent prospectors still have an opportunity to make significant mineral discoveries. As the surface of Alaska becomes more fully known, a greater chance for discovery of new deposits will come through the application of systematic study and new scientific techniques. Recent uranium discoveries in the Territory were made by prospectors using ground and airborne radiation detection equipment.

The Territory provides certain services to encourage new mining development, such as the fully equipped assay offices at Ketchikan,

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Juneau, Anchorage, and College. Prospectors are encouraged to use those offices and services are available without cost. In recent years short courses in mining and prospecting have been given at larger Alaskan towns by the School of Mines of the University of Alaska to acquaint interested residents with the fundamentals of prospecting and mining. Field engineers employed by the Territory also are available to examine prospects if the owners cannot afford the services of a private engineer.

To date no commercial oil or gas production has been established in Alaska. However, leasing, unitization, exploration, and drilling activities have reached a significant stage. As of December 31, 1955, approximately 2,834,000 acres of Federal lands were held under 1904 oil and gas leases. Several of the larger oil companies had geological and geophysical field parties working in various areas during the 1956 field season, and all indications point to an increase in such activity during the 1957 field season.

Five wells were drilling in Alaska during the 1955 season; however, only 1 well continued drilling through the winter. Two wells were abandoned in 1955 and drilling was suspended at 3 wells during the winter.

MINING REGIONS

Southeastern Alaska

The Juneau and Chichagof lode gold districts, Ketchikan and Hyder mining districts, and a number of smaller mineralized areas are in southeastern Alaska. These areas include at least one antimony deposit, iron-copper deposits at several places on Prince of Wales Island, iron deposits in the vicinity of Klukwan and Snettisham, a copper-palladium deposit near the head of Kasaan Bay, and gold lodes. A molybdenite deposit was partially developed a number of years ago near Shakan, but no ore was produced. Tungsten deposits containing some lead and silver have been worked in the Hyder district and lead-zinc deposits are known in the Wrangell, Petersburg, and Ketchikan districts, although they have not been exploited to a substantial degree. Large low-grade nickel deposits are present on Yakobi, Chichagof, and Admiralty Islands. There has been commercial production from the enormous reserves of marble and high-calcium limestone which are distributed widely in southeastern Alaska, including large amounts near tidewater. Pyrite, which is the sulfide of iron, occurs in large bodies in several localities in that area. Uranium-thorium occurrences are known at several localities in the region and development is in progress in the vicinity of Bokan Mountain on Prince of Wales Island.

Gulf of Alaska-Prince William Sound Region

Gold and copper lodes are distributed widely in the Prince William Sound region and have been mined at several places on a commercial scale. These resources lie chiefly in a northern gold belt at Port Valdez and Port Wells and a southern copper belt on Latouche and Knight Islands and at Ellamar and Port Fidalgo. A 300-mile belt of Tertiary rocks along the Gulf of Alaska offers favorable petroleum possibilities. The Katalla district in this belt produced a small amount of petroleum a number of years ago, and drilling is currently in progress in the Yakataga district. Bituminous coal is present in the same area with some production from the Bering River field in the past. Gold beach placers have produced on a small scale at a number of places along the coast.

Alaska Railroad Belt

A number of minerals are present in the Alaska Railroad Belt. In the eastern part of Kenai Peninsula, near the Alaska Railroad, are gold placer and lode mines. A small production has come from gold lodes at Nuka Bay, west of Seward. Chromite has been mined in the southern part of the Kenai Peninsula. Much of the western half of the peninsula is underlain by sub-bituminous coal, which occurs also near Tyonek, on the west side of Cook Inlet.

The Matanuska valley contains large resources of relatively high-grade coal which are being mined. Petroleum possibilities exist near the east end of the valley where drilling was in progress in 1956.

The Willow Creek district has been second only to the Juneau district in the production of lode gold. Mining stopped in the district during World War II and recovery has been slow.

In the Susitna valley are a number of small copper and gold lodes. Gold placers occur in such districts as Yentna and Valdez Creek, and a number of areas contain lignite-bearing rocks.

Sub-bituminous coal has been found at many places in the Alaska Railroad belt north of the Alaska Range. The Nenana coal field, the most highly developed of the sub-bituminous coal fields of Alaska, lies on the north flank of the Alaska Range near the railroad and supplies nearly all of the coal burned in the Fairbanks area.

The Bonnifield and Kantishna mining districts are in the railroad belt north of the Alaska Range. Gold placers of the Kantishna district have been productive. Antimony ores have been mined; and gold, copper, and zinc lodes are known.

One of the most productive placer mining areas in the world is the Fairbanks placer district near the northern end of the Alaska Railroad. Gold mining is reviving in that district. Tributary to the northern

part of the railroad are the placer districts of Hot Springs, Circle, and Livengood. Substantial quantities of gold have been produced from lodes in the Fairbanks district and some antimony and tungsten have been extracted.

Copper River Region

The Copper River region is known chiefly for the copper-bearing lodes that have been mined in the Nizina district. Most of the copper mined in Alaska came from the properties of the Kennecott Copper Corporation, but the principal mines have been worked out and closed. The gold placer districts of Nizina, Chistochina, Bremner, and Nelchina are within the Copper River region. The well-known Nabesna lode gold mine is a few miles to the north of that region on the north slope of the Wrangell Mountains.

Southwestern Alaska

Southwestern Alaska has resources of gold, platinum, quicksilver, antimony, copper, and coal. Gold placers are distributed widely and are being mined actively at a number of places. Gold lodes also have been exploited at several places, but the lode production has been relatively small. Quicksilver deposits have been developed within the past few years near Sleetmute, DeCourcy Mountain, Marsh Mountain near Aleknagik, and, to a lesser extent, on Cinnabar Creek. Other quicksilver deposits are known but are undeveloped. Quicksilver deposits are associated with substantial amounts of antimony ore. The important Goodnews Bay platinum district is in southwestern Alaska between Bristol Bay and the mouth of the Kuskokwim River. Placer platinum was discovered in that area in 1926 and now it is the leading domestic producer of platinum group metals. Gold, silver, and copper-bearing lodes have been found in the vicinities of Iliamna Lake and Lake Clark. The Alaska Peninsula includes several areas that may be of potential importance as sources of oil. Petroleum possibilities exist at several places in the Chinitna and Kanatak districts and drilling has been done on a few structures. In 1955 drilling was in progress in the Chinitna district. Coal deposits are known at Herendeen Bay and several other places. Lode gold mining was carried on years ago on Unga Island and base metal deposits are known on Sedanka and other islands. Sulfur deposits are associated with some of the active and recently active volcanoes, such as Makushin on Unalaska Island. For a short time after World War II pumicite deposits were mined in a small way for use as lightweight concrete aggregate.

Yukon Region

The Yukon region is tributary to the Yukon River and contains many placer gold districts—Seventymile, Coal and Woodchopper Creeks, Circle district, Chandalar, Hogatza, Rampart, Ruby, Poorman, and Iditarod. The aggregate production has been large. Tozimoran, Manley Hot Springs, and several districts in the general area also have been worked to a small extent for placer tin. Petroleum possibilities are present in two portions of the region, the Koyukuk province, an area of 55,000 square miles in west-central Alaska, and the Kandik province, an area of 70,000 square miles adjacent to the Canadian boundary.

Seward Peninsula

The principal mineral production of the Seward Peninsula has been from the gold placers of Nome and other districts. A few gold, silver, antimony, and tungsten lodes have been exploited in a small way. Placer and lode tin near York, placer platinum, and a little graphite and garnet have been mined. Some coal has been mined at Chicago Creek in the northeastern part and small scattered deposits have been found in other parts of the peninsula.

Northern Alaska

Northeast of Seward Peninsula, in the Kobuk-Noatak region, a little placer gold has been mined on tributaries of Squirrel River near Shungnak, in the Kobuk basin. Gold-bearing gravels have been found in several other localities. Lodes carrying copper, gold, and silver also have been found. Samples of columbite, tantalite, and other rare minerals have been discovered in the region. Some lignitic coal is known in the Kobuk basin. Jade and high-grade asbestos have been obtained in small amounts from the region. Considerable interest has been shown in recent years in prospecting areas in the Brooks Range. Those activities center near Wild Lake, along the headwater tributaries of the Chandalar, the Coleen, and the head of the Firth River. The plateau and coastal plain area, north of the Brooks Range, contains oil possibilities. Naval Petroleum Reserve No. 4 is in that area. Coal is distributed widely and in places is good grade bituminous. Coal has been mined at Corwin, Cape Lisburne, and, to a small extent, on the Meade River, south of Point Barrow.

Naval Petroleum Reserves No. 4 comprises 37,000 square miles north of the Arctic Circle. An indicated shortage of oil, particularly on the west coast during the latter part of World War II, caused the Navy to undertake the exploration of that reserve for oil. Several test

wells were drilled, ranging in depth from 2,000 to 11,800 feet. One moderate-size and one minor oil field, and one large gas field, as well as several smaller ones have been discovered. Surveys and drilling were recessed in 1953.

ALASKAN MINERAL PRODUCTION, 1954

In 1954 the mine value of minerals produced in Alaska was $26.3 million, of which placer gold accounted for $8.7 million, coal for $8.3 million, sand and gravel for $6.3 million, and other minerals, $3.0 million. Regionally, the Yukon River area was most prominent, with $14.1 million, and Cook Inlet–Susitna was second, with $6.3 million. Sand and gravel average mine values were very close to the United States average, but mine prices of coal were more than twice the U. S. average. Approximately the equivalent of 1,000 full time people were employed in mining, but because of weather conditions nearly all mining activities work about half the year. Another 300 persons were employed in petroleum drilling in 1953. The average quarterly earnings of employees (of companies reporting under the Old Age and Survivors Insurance program) was $2,000 in 1953. The highest mining earnings were in coal, averaging $2,500 per quarter. Petroleum field workers received an average of $2,200 per quarter. Metal mining employees averaged $1,200. Average quarterly coal mining payrolls slightly exceeded construction ($1,800), but greatly exceeded public utilities ($1,230), service industries, and retail trade ($1,000). In 1950 mining employment was 3.2 percent of the employed civilian labor force—this was twice the average for continental U.S.A.

According to The Biennial Report of the Alaska Resource Development Board for the period 1955–57, preliminary figures released by the U. S. Bureau of Mines show the total value of mineral production for 1955 to be $25,412,000. Preliminary estimates for 1956 place this value at $24,659,000.

PUBLICATIONS

Information on the geology and mineral resources of Alaska is available from the U. S. Geological Survey, the U. S. Bureau of Mines, and the Territorial Department of Mines.

An index map and a complete list of Geological Survey reports are available without charge from Geological Survey offices at Washington 25, D. C.; Denver Federal Center, Denver, Colorado; 4 Homewood Place, Menlo Park, California; and at the Federal and Territorial Building, Juneau, Alaska; 520 Illinois Street, Fairbanks, Alaska; and 210 Glover Building, Anchorage, Alaska.

Available publications may be purchased at the prices quoted in the index by mail from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., and by over the counter sale only at the Geological Survey Office at 210 Glover Building, Anchorage, Alaska; and at 724 Appraisers Building, San Francisco, California; and 1031 Bartlett Building, Los Angeles, California. Geological Survey reports are available for consultation at most large institutional and public libraries.

The Territorial Department of Mines has published a number of reports on the results of its investigations and also publishes a biennial report on Alaska's mining industry.

Agriculture

Agriculture in Alaska continues to be a subject of study, research, and great interest. Exploratory investigations reveal that Alaska is capable of producing 45 to 55 percent of its own requirements of agricultural products, instead of approximately 10 percent, the quantity now produced. Economically this level of production has not been feasible due to insufficient cleared cropland, storage problems with some crops, poor production practices, problems of market organization and lack of production credit. Many of the agricultural needs of Alaskans now are shipped from the States, especially butter, eggs, poultry, pork, lettuce, celery, and other fresh vegetables. The high freight rates for goods imported provide a tariff protection for the Alaska farmer but this price advantage will decline as transportation facilities from the States are improved or as freight rates are decreased. This, in turn, will require more efficient farming to reduce costs of production.

Farmers obtain good prices for their produce although it must be sold for less than the cost of shipped in foodstuffs. In fact, prices of practically all products are high in Alaska, partly because of its isolation and the high cost of transportation. This is true of the things the farmer has to sell and also of the things he must buy—machinery, fertilizer, fencing, lumber and other supplies.

One of the greatest factors hindering efficient farming and proper agricultural development in Alaska since World War II has been the lack of information available to settlers concerning land capability, utilization, and availability. Intensive research and examination of present and potential agricultural areas to determine their extent, relative productivity, livestock requirements, ability to support population, prospective products, markets, and technical problems of development are providing the basic information for the establishment and main-

tenance of a permanent and efficient agricultural industry in Alaska. Various agencies are conducting research programs on the foregoing subjects and have included several additional departments of research: animal husbandry, agronomy, soil, horticulture, entomology, plant pathology, engineering, and economics. Work is in progress on some programs, including improvements of grains and grasses, development of legumes to meet special conditions, soil management, improvement of pasture lands, control of insects, plant diseases and weeds, adaptation studies of fruits and berries, and many other. Such information is necessary to guide new settlers, to help gardeners and part-time gardener-farmers in the towns and villages as well as in the country, and to provide a foundation for improving the living standards of farmers in the Territory. Many of these people have had no experience in farming and all need assistance on localized production problems.

Another major problem affecting agricultural development in Alaska has been the inadequacy of financial assistance to farmers for farm settlement and improvement. Potential Alaska farmers seldom have the capital that is required to obtain the necessary equipment, clear and cultivate lands, and sustain themselves and their families for the long period that is necessary before any income can be derived from farming. Some aid now is provided (see Financial Aid to Settlers).

Land clearing is the most expensive and hardest problem facing the new settler in Alaska. The cheapest and quickest method of clearing and fitting the land for its first crop must be used. A dairy farmer can expect to produce an oat-pea crop the first year. The high cost is a serious limiting factor to stock farming and range livestock production. Today most of the cleared land is devoted of necessity to the production of cash crops (potatoes and other vegetables) and dairying.

PERMAFROST

Permafrost, or perennially frozen ground, underlies most of Alaska north of the Alaska Range, and includes much of the potential agricultural land in the Interior. In that vast region, except for the upper few feet of soil thawed each summer, and scattered areas of completely thawed ground, permafrost ranges from one to several hundred feet deep, depending on the present climate, the past climatic and geologic history, physical properties of the soil and bedrock, and upon the additional factors of slope, drainage, exposure, and vegetation cover. South of the Alaska Range, only scattered occurrences are known in the lower Matanuska and Susitna valleys, but in the Copper River basin permafrost is much more widespread and very much thicker. In general, permafrost increases in thickness and areal extent from the south coast northward.

Permafrost locally contains large clear ice masses, blocks, wedges, or irregular bodies. These underground ice masses are not detectable by a person selecting land for farming or for construction, without exploratory drilling, although their presence may be indicated locally by other geologic conditions or surface features. Once the vegetation mat is stripped away and the permafrost begins to thaw, pits may develop in the surface of the ground as the ice blocks melt and leave cavities at depth. The time required for pits to develop depends on the size and depth of the ice masses, the temperature of the permofrost, and the capacity of the soil to transmit heat. Pits developed in fields cleared for crops require occasional grading, which adds to the already high expense of clearing; but the consequences of ground subsidence are even more serious and costly when they affect buildings, roads, or other structures.

Permafrost adds to the expense of developing adequate ground water supplies. Because permafrost is impermeable, shallow wells are often dry or limited producers; deep wells must be drilled to water-bearing horizons beneath the permafrost. The presence of permafrost at shallow depth also impedes surface drainage, and accumulation of surface water may cause new thawing of underlying permafrost.

Studies of Permafrost

Permafrost is a field of study in itself, with applications in geology, engineering, and several others fields. The United States Geological Survey, Department of the Interior, and others, are sponsoring researches into the nature and character of permafrost. Surveys of permafrost conditions are being conducted as a basis for locating and designing structures, and investigations are under way bearing on the design of roads and buildings that can be maintained over permafrost. Interpretation of these data, as well as some special studies relating to specific farm problems, are of great value to farmers and others in northern and central Alaska. Research results are being made available able to those interested.

ARABLE AREAS

The areas in which most agricultural activities are found are around Palmer in the Matanuska Valley north of Anchorage, and around Fairbanks in the Tanana-Chena Valley. The developed sections around Fairbanks are smaller than those of Matanuska. Small production is under way near Anchorage and in scattered locations on the Kenai Peninsula. An estimated 12,000 to 15,000 acres were in crops in 1955 and land is being cleared at the rate of about 1,000 acres per year.

The Alaska Peninsula, Kodiak Island, and the Aleutians afford opportunities for grazing and are potential sources of meat animals and wool although markets are far away. Only a few cattle and sheep are ranged in those areas at present.

The southeastern coast of Alaska is not suitable for agriculture, except for certain limited sections. Truck gardening and poultry farming, however, provide livings for a number of local residents. Several dairies supply local milk. Most of the feed for the cattle is shipped from the States.

Areas for which land classification surveys have been made are Homer, Ninilchik, Kenai, Anchorage, Goose Bay-Wasilla, Big Delta-Goodpaster, Nenana-Fairbanks, Salcha River, Central Copper River Basin, Haines, and the Matanuska Valley.

GROWING SEASONS

The growing season averages 140 days along the southeastern coast, 120 days on the central Pacific coast, and 80 to 90 days in the central Tanana and upper Yukon Valleys. The unusual length of the summer day compensates somewhat for the shortness of the growing season in the northern valleys.

MATANUSKA VALLEY

Location, transportation, climate, and soils combine to make the Matanuska Valley one of the most promising areas for agriculture in Alaska.

The valley first became known when gold was discovered in the Talkeetna Mountains in the late 1800's. A small gold rush occurred and a number of people settled in Knik Village, but at the end of the 19th century only a few Indians, hunters, fishermen, and trappers remained in the area. It is believed that the first white settlers came to the valley in 1911 and by 1913 many homesteads were occupied by trappers, fishermen, miners, and a few farmers. In 1916, The Alaska Railroad was built through the valley and the occupations of hunting, fishing, and trapping gave way to mining gold and coal, as commercial deposits of coal were found in the northeastern corner of the area, and later to farming.

In 1929 the management of The Alaska Railroad instituted a colonization project. Less than 100 families were brought to the valley by the Railroad and today there are a few of these earlier colonists living in the area.

Up to this point, settlement was unplanned and land was settled by individuals rather than by groups. In the fall of 1934, the Federal Gov-

ernment proposed group settlements in Alaska as a part of the Federal Emergency Relief Administration (FERA), a nation-wide program already functioning in the United States. Under this program people in the States needing aid were encouraged to turn to farming and organized farming projects were administered by Rural Rehabilitation Corporations. It was believed that planned settlement by groups would add greatly to the development of agriculture in Alaska and aid in supporting the Alaska population with more locally produced food, thereby reducing dependence upon costly transportation.

A section in the eastern part of the valley, mostly adjacent to the western side of the Matanuska River on unappropriated public domain, was selected as the first site for group settlement. Later the center of settlement shifted eastward from Wasilla to the village of Palmer.

In 1935 the Alaska Rural Rehabilitation Corporation (ARRC) was formed as a Territorial agency and a nonprofit corporation to undertake a program of agricultural colonization in Alaska and administer the project, which was called the Matanuska Valley Colonization Project. Headquarters was established at Palmer. Settlers were chosen from northern midwestern States, where farming conditions were similar to those in the valley, and 202 families sailed from Seattle in 1935. Funds were granted by FERA and the colony was set up as a cooperative rural community.

PALMER AND NEARBY MATANUSKA VALLEY DAIRY FARM.

Location, Transportation, and Population

The Matanuska Valley is a lowland in south-central Alaska between the Talkeetna Mountains on the north and the Chugach Mountains on the east and south. The valley opens southwestward into Knik Arm and Cook Inlet. Principal villages are Palmer, Wasilla, Matanuska Junction, and Knik Village. Anchorage, Alaska's largest city, is 50 miles away by road or railroad.

The main line of The Alaska Railroad from Anchorage to Fairbanks runs through the western part of the valley and a branch line extends from the main line to Palmer and to the coal mines at Jonesville. Nearly every farm has access, within a short distance, to a gravelled road. These roads form a network in the valley and connect with the town of Palmer, Glenn Highway, Richardson Highway, and the Alaska Highway to the States. Three landing strips for airplanes are in use. The United States can be reached by sea, air, or road.

Final results of the 1950 census showed over 3,000 permanent residents in the Matanuska Valley area of which 890 are residents of Palmer.

The Matanuska Electric Association, a cooperative financed by the Rural Electrification Administration, furnishes electricity for Palmer and the entire valley. Most farms have electricity. The Matanuska Telephone Association is expected to provide area phone coverage by 1957.

Soils

The soils have developed from water- and wind-sorted materials under cool and moist conditions like those of the Tanana Valley near Fairbanks, but without permafrost and under a somewhat heavier growth of trees. Most of the soils have developed from silty and very fine sandy materials laid over a base of water-sorted glacial drift, consisting of mixtures of gravel, cobbles, and sand in varying proportions. The variable soils, on the whole, are responsive to good soil management, but, as in most of Alaska, the environment has produced soils that are unable, even immediately after clearing, to give high yields of farm crops without heavy applications of commercial fertilizers. Some soils are extremely shallow, some susceptible to blowing, but properly managed, the soils are fertile and average crop yields are high. Wind erosion is a serious threat to farmlands in some parts of the valley.

Drainage

In general, drainage of the area is poor. Three streams carry most of the water. In the center of the valley three elongated lakes drain into Cottonwood Creek which flows 9 miles to Knik Arm. East of the lakes the runoff is carried by Wasilla Creek. To the west of the lakes drainage

is westward by Meadow Creek through Big Lake and Fish Creek. The Matanuska and Knik Rivers drain the Chugach Mountain slopes into the head of Knik Arm; the little Susitna River flows westward along the base of the Talkeetna Mountains slopes and southward to the head of Cook Inlet.

Climate

The winters are not so cold in Matanuska Valley as in the Fairbanks area, summers are not quite so warm and sunny, rainfall is slightly higher, and the growing season is a little longer. The average July temperature is 57.7° F., the average January temperature is 12.6°. Average annual precipitation is 15.6 inches and the average growing season is 108 days. From mid-June through July there is practically no darkness, which is favorable to the growing season.

Rather heavy windstorms occur occasionally. The cold "Matanuska" winds generally enter the valley from the northeast and occur more frequently during late fall and winter. Warmer and more moist "Knik" winds enter the valley from the southeast or east and occur at any season, but more often in winter and early spring.

Although rainfall is usually adequate for crops on most soils, farm practices must take account of the need to conserve moisture in early spring. Cloudy, misty, and rainy weather in late summer sometimes delays harvesting.

Types of Farming

The major types of farming prevalent in the valley are dairy, potato, potato-vegetable, and small poultry. A few full-time general farms exist, but there are many residence-farms with several minor enterprises.

Many varieties of potatoes, and many kinds of vegetables grow in abundance. Hot weather crops, such as tomatoes and cucumbers, are grown mostly in greenhouses. Bush fruits produce large yields of excellent quality. Oats, barley, wheat, and Canadian field peas are grown. Brome grass is becoming popular for hay, silage, and pasture.

Average yields per acre in the Matanuska Valley are as follows:

Oats	43 bushels.	Potatoes	6.0 tons.
Wheat	24 bushels.	Cabbage	10.0 tons.
Barley	35 bushels.	Carrots	5.0 tons.
Hay	1.7 tons.	Lettuce	6.0 tons.
Silage	6.0 tons.		

The production of grade "A" milk is one of the chief types of farming in the Matanuska Valley. A few farmers raise a small number of beef

cattle, hogs, and sheep, but they are not economical to produce at present on Alaska's expensive cropland. The consumer demand for fresh beef is good, but the huge requirements for winter feed and the expense of growing hay and grain, high cost of land clearance in this section, and lack of commercial slaughter facilities, are serious limiting factors to stock farming and range livestock production. Most of the cleared land is of necessity devoted to cash crops (potatoes and other vegetables) and dairying. Extensive summer range is in the Talkeetna Mountains, north of Palmer, but the winter feeding season is long. Good outdoor grazing does not exist usually after the middle of October.

Matanuska Valley Farmers Cooperating Association

Most of the farm products are marketed through the Matanuska Valley Farmers Cooperating Association. The cooperative was incorporated in 1937 to assist in marketing the products of the farmers of the Government Colony. Management of the business is in charge of a Board of Directors, elected by the membership. A general manager is employed by, and is directly responsible to, the board of directors. The equipment and all facilities for handling the business were purchased from the Alaska Rural Rehabilitation Corporation by the cooperative in the spring of 1940. The cooperative also operates in Palmer a large general store, dairy plant with a branch in Anchorage, a produce department, garage, warehouse, cold-storage plant for potatoes and other vegetables, and other facilities.

Acquiring Homesites in the Matanuska Valley

Small acreages for homesites are available for purchase in the Matanuska Valley. These homesites are close to roads and electricity. The purchase price depends upon the location of the land and varies from $10 to $50 per acre. The land is purchased from the Federal Government but approval first must be obtained from the ARRC at Palmer. No approval for the purchase of homesites is granted by the Corporation without a personal interview. Information may be obtained from the Alaska Rural Rehabilitation Corporation, Palmer Alaska.

TANANA VALLEY

The Tanana Valley in the neighborhood of Fairbanks has an established agricultural community. Although only a few thousand acres have been cleared for crops and pasture, this is a promising agricultural area. Farming is the main source of living for relatively few families, but the possibilities for success have been well demonstrated. Reason-

ably large areas of soil could be used for more farms, if local roads were built and if the land could be obtained at reasonable cost. The main farming area lies northwest, north, northeast, and east of Fairbanks.

Soils

On the valley floor the soil ranges from coarse sand to very fine sand and is well adapted to the production of hay, grain, and vegetables, including potatoes and small fruits. The slopes on the hills adjoining the valley are composed of silt loam, a heavier soil. Southerly slopes are well adapted to the production of hay, quality potatoes, and to ripening cereal crops such are barley. For potatoes, vegetables, forages, and grains fertilizers are required from the very start.

Climate

The summer weather is pleasant, but the winter is more enjoyable because there are no mosquitoes and no dust—two unpleasant accompaniments of summer. Wind is almost nonexistent, summer or winter. The July average temperature is 60° F.; January average is 11.6° below zero. Average rainfall is 11.67 inches; average winter snowfall is 50 inches. Average frost-free period for hardy crops extends from about May 20 to about September 5. The nearly continuous sunshine in summer accelerates crop growth.

The annual rainfall usually is adequate for the production of crops on most soil in the area, but conservation of moisture is an important aspect of farm practice. Many persons irrigate their gardens.

It is of interest to note that small grains usually mature earlier and more completely in the Tanana Valley than farther south. The longer days and warmer, drier summer climate are responsible for this advantage in development.

Livestock

A few modern dairy farms, a few flocks of sheep and goats, and some hogs and poultry constitute the present livestock industry of the Tanana Valley. Some settlers are considering the possibility of renewing the early-day practice of growing or at least summering beef cattle in this section. The winters are longer and more severe than farther south and the winter feed problems are more acute. Most of the snow remains on the ground unmelted and undisturbed by wind throughout the winter. Consequently, great supplies of winter feed are necessary for the proper maintenance of livestock.

Marketing

The Tanana Valley Farmer's Cooperative Association in 1956 merged with the Matanuska Valley Cooperating Association in order to facilitate the solution of many marketing and supply problems.

The military installations at Ladd Field and Eielson Field purchase large quantities of produce.

Information

Additional information will be furnished upon request by the Land Office, Bureau of Land Management, Fairbanks, Alaska.

KENAI PENINSULA

Some of the better potential agricultural lands of Alaska are situated in the western portion of the Kenai Peninsula between Kachemak Bay and the Kasilof River. On the basis of reconnaissance surveys it has been estimated that 204,708 acres of bench and bottom land in the Kenai lowland are sufficiently smooth and well drained to be used for crop production. Most of the agricultural lands south of the Kasilof River that are unappropriated remain open to settlement. North of Kasilof, except for a 6-mile-wide coastal strip and the lands along the Kenai River in which there is a relatively high proportion of agricultural land, the area was closed permanently to entry in 1941 through incorporation in the Kenai National Moose Reserve.

Lands best suited for general crop production, totaling 41,415 acres, are mainly north and northeast of Homer, north and south of Ninilchik, south and southwest of Kasilof, and south and southeast of Kenai village. Areas suitable for limited general crop production and livestock farming, totaling 90,760 acres, are distributed irregularly through most of the western coastland belt. Tracts suitable for forage crop production and grazing, totaling 72,533 acres, comprise mainly range lands in the Caribou Hills to the south-central portion.

Lack of transportation has been one of the greatest disadvantages to settling on Kenai Peninsula, but the new road around Turnagain Arm connects the road system on the peninsula with Anchorage, the main road network, and the Alaska Highway, providing a more secure outlet for farm products.

Soils

Most of the better drained land is considered fair to good farm land. The prevailing silt and fine sandy loams usually are easily worked and

responsive and under good farming practices produce good crops of potatoes, hardy vegetables, and hay. Dairying is believed to be the most promising type of farming for the peninsula as a whole. Only a few families make their income from truck farming.

The soils in the Homer area are fair to good for crop use and are mostly medium textured, dark colored, and moderately well drained. The growth of crops is slow in spring and throughout the growing season—so slow that small grains do not ripen. The most promising agricultural enterprises for the Homer area appear to be stock raising, dairying, and the production of cool-season vegetables. Stock raising makes use of the grasses and legumes, which are adapted to this climate.

Climate

Maximum temperatures in the Kenai Peninsula in summer range between 55 and 65 degrees. Winter day temperatures usually range between 5 to 20 degrees above zero. Average growing season is 104 days at Homer, 84 days at Kasilof, and about 95 days at Kenai. Daylight reaches a maximum of about 19 hours in midsummer. Precipitation should be adequate. Average annual rainfall at Homer is 32.9 inches, decreasing from Homer up the Inlet. Snowfall averages 98.7 inches.

Information

Information as to the ownership status of specific tracts of land and other data relating to public domain lands on the Kenai Peninsula may be obtained from the Land Office, Bureau of Land Management, Box 1470, Anchorage, Alaska. Also, recently compiled information relating to land use, occupancy, and ownership of homestead lands on the Western Kenai Peninsula, is available from the Alaska Agricultural Experiment Station, Palmer, Alaska.

OTHER AGENCIES ASSISTING AGRICULTURAL DEVELOPMENT

During the 1945 term, the Territorial Legislature created an Alaska Department of Agriculture to aid in the development of agricultural resources. Information on agricultural subjects may be obtained from this Department's office in Palmer.

Several years ago, the Territorial Legislature passed the Soil Conservation District law. This law was enacted to provide for the development, use, and conservation of Alaska lands in accordance with their

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capabilities. Organized soil conservation districts are at Homer, Kenai, Anchorage, Chugiak, Palmer, Wasilla, Salcha, and Fairbanks. These districts contain about 95 percent of the agricultural land in the Territory and will be a strong force in determining the agricultural policies pursued in Alaska by the Federal and Territorial Governments.

The Production and Marketing Administration is another Federal agency which contributes financial assistance to Alaska farmers. The Alaska activities of this Administration are performed through the Agricultural Extension Service at the University of Alaska. These activities are developed under the provisions of the Soil Conservation and Domestic Allotment Act.

Forests and Forest Products

Forests of Alaska present challenging opportunities for immediate large- and small-scale development. Forested lands of the central or interior area and the two national forests of the southeastern area constitute a resource capable of supplying a sustained production of several billion board feet of timber annually. Timber cutting under proper management could be increased greatly without jeopardizing the future supply. The demand for Alaska timber products exceeds production by almost 100 million feet board measure annually, which indicates that opportunity exists for the establishment of new sawmills as well as expansion of existing plants. Postwar construction in Alaska and the States demands an ever-increasing amount of lumber, plywood, and other wood products which could be produced in Alaska.

Most of the usable forest resources are under the administration of two Federal agencies, the Bureau of Land Management, Department of the Interior, and the United States Forest Service, Department of Agriculture.

All lands in Alaska which are not under private ownership or withdrawn for other purposes, such as national forests, national parks or monuments, military reservations, power sites, and rights-of-way, are considered vacant, unappropriated public domain. These lands are open for entry by individuals and groups for agricultural homesteads, homesites, business sites, and other purposes. Until such time as they are entered upon, these lands are administered by the Bureau of Land Management. The area includes the forests of central or interior Alaska and the treeless tundra and grasslands of the Arctic, Bering Sea, and the Alaska Peninsula.

The forested areas in Alaska under the jurisdiction of the United States Forest Service comprise the Tongass and the Chugach National Forests, which include most of the southeastern and Alaska Gulf

coastal forests. These reserves were established between 1902 and 1909. They were reserved from vacant public lands to be managed for sustained annual yields of forest products for all time.

National parks and monuments in Alaska are administered by the National Park Service, Department of the Interior. Although these areas contain forest resources, under the laws governing the preservation of such areas the timber is not subject to commercial development.

INTERIOR FORESTS AND TREELESS TUNDRA

Interior Alaska has two broad vegetative types, the forested lands of central or interior Alaska and the treeless tundra and grasslands of the Arctic Slope, Bering Sea, and Alaska Peninsula. By far the larger part of these lands are public lands (vacant and unappropriated public domain) administered by the Bureau of Land Management, United States Department of the Interior.

Interior forests are composed of extensive stands of white spruce, Alaska birch, cottonwood, black spruce, aspen, and larch. These forests occupy about 60 percent of the land of Alaska. While most of the country never has been mapped nor the timberlands inventoried, it is estimated that there are 125 million acres of interior forest, of which 40 million acres represent stands of perhaps 4 cords per acre. Thus, there is an estimated total timber volume of 700 million cords or the equivalent of 350 billion board feet. The lack of commercial development of this timber is due to poor acessibility to the timber areas.

Interior forests are the westward extension of the sub-Arctic type found throughout northern Canada and are in extensive stands on the low valley benchlands and as narrow belts of timber along most of the stream courses. These forested areas are moderately to heavily interspersed with wet muskeg areas, lakes, and ponds of varying sizes. Timberline lies generally between 1,500 and 2,000 feet, occasionally rising to 3,000 feet and falling to less than 600 feet. Extensive stands of spruce timber are found north of the Arctic Circle on the south slopes of the Endicott Range.

About 30 percent of Alaska's land area is included in the tundra and grassland areas. The tundra zone is too cold and the lands too wet to support tree growth but are well stocked with a cover of lichens, sedges, mosses, and dwarf willows and other shrubs which provide the natural range for herds of caribou on which a large part of the native population depends for its livelihood. Grasslands of the Alaska Peninsula and the Aleutian Islands may have substantial grazing potentialities for a new and important industry—production of cattle and sheep on a large scale.

Interior Forest Types and Species

White spruce and Alaska birch predominate in the interior forests. Aspen is common on burned areas and black cottonwood and balsam poplar show vigorous development along stream courses. Average tree diameters range from 6 to 20 inches at breast height. Extensive timbered areas have been denuded by fire, which—due to the dry climate—constitute the major problem in forest management in the interior.

Pure spruce stands are found throughout the forested areas of the Territory and typically at the limits of tree growth in latitude, longitude, and altitude. It is the most important commercial species in the interior, primarily because it is growing where needed for consumption. This is highly important where limited transportation routes and high freight costs for importing lumber products would be excessive and prohibit normal development. White spruce has a rapid taper, is usually limby nearly to the ground, is relatively free of fungus and disease, produces little clear lumber, and probably never will enter the export market.

Alaska birch is the most important of the few hardwood species found in Alaska. A dense wood with a fine, even txeture, the Alaska birch finishes well and is moderately heavy and strong. It is satisfactory for furniture, flooring, molding, and woodenware and is the source of many turned articles. When stained it resembles mahogany.

Of the numerous species in the interior forests, prospects probably are better for immediate large scale exportation of Alaska birch than any other. The wood is similar to that of the valuable birch species found in the northern States and Canada and as the stands are being depleted rapidly in these areas, it is logical to expect increasing pressure for the use of Alaska birch for high grade veneers in furniture manufacturing and for interior trim.

Interior Lumber Industry

Over 70 sawmills in interior Alaska obtain timber from public domain lands. These portable mills have capacities of from 5,000 to 20,000 board feet per shift and are moved from stand to stand as logging progresses.

The mills are cutting white spruce for lumber, dimension stock, squared house logs, and other forms. Commercial sales from public lands in past years have varied from 24 to 49 million board feet annually. The military services have used large volumes for their varied purposes. Had it not been for the use of timber from the interior forests, building the Alaska Highway could not have been accomplished in the short length of time consumed when it was of such strategic value to our Nation.

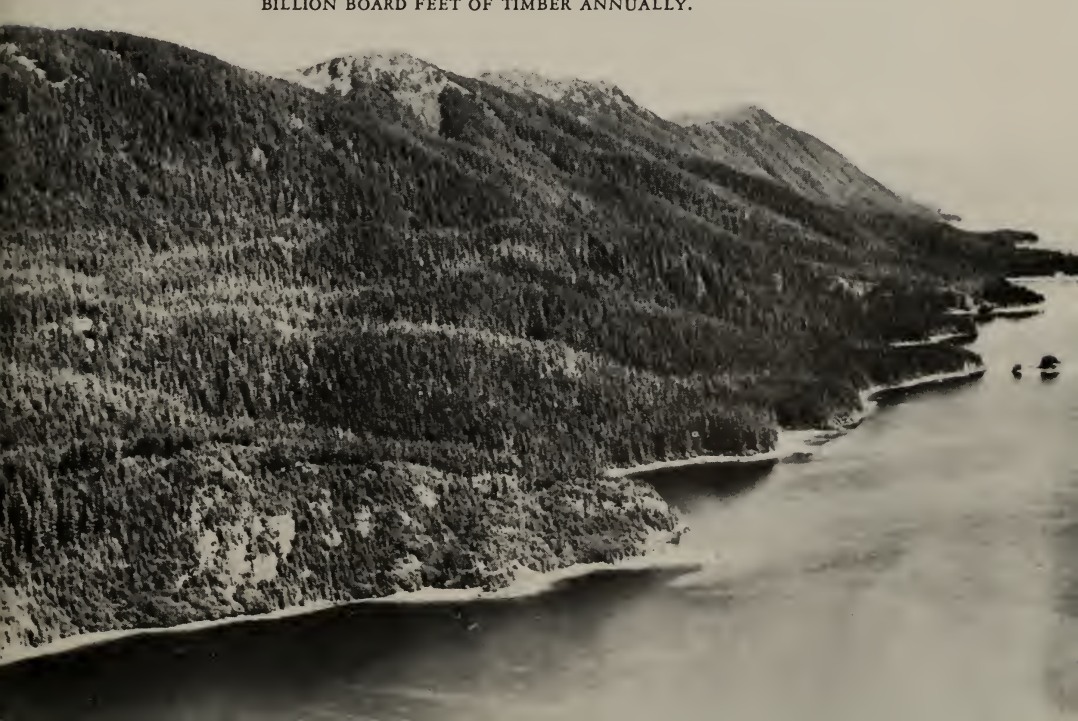
Sales of timber from the public lands in Alaska are made in much the same way as in the States. The timber is appraised and offered for sale at not less than the appraised price. All large sales are offered subject to competitive bidding. Some small sales are negotiated. Prices received in the past have averaged generally below those for similar timber in the States.

Free use of timber on public domain in the interior forests is permitted settlers, miners, and residents for their own use, but not for resale. From 2 to 10 million board feet of timber are taken annually under this privilege. Information concerning free-use timber permits and timber sale contracts may be obtained from the Division of Forestry, Bureau of Land Management, which has offices in Anchorage and Fairbanks.

Other Forest Values

Interior Alaska is a region of low rainfall with annual precipitation of 8 to 15 inches and long summers of almost continuous daylight. The forest and range vegetative cover provides watershed protection and helps to regulate the flow of streams that are so important to the fisheries, the placer mining industry, and as a source of domestic water supply for widely separated communities. Forests also provide cover and habitat for Alaska's famous game and fur animals. The nesting grounds of waterfowl using the Pacific flyway also are in the interior. The forests make possible the settlement and development of Alaska and provide scenic splendor for thousands of tourists who visit the country each year.

ALASKA'S FORESTS—CAPABLE OF SUPPLYING A SUSTAINED PRODUCTION OF SEVERAL BILLION BOARD FEET OF TIMBER ANNUALLY.



Since the days of the gold rush, interior Alsaka has been subjected to serious, widespread fires which have burned and reburned an estimated 80 percent of the forests and rangeland acreage. The majority of fires have been the result of man's carelessness. Because of the warm, arid summers, the vegetative cover is highly inflammable and fires once started quickly attain large proportions. Running crown fires are typical throughout the summer.

The Division of Forestry, Bureau of Land Management, is responsible for the prevention and suppression of forest and range fires on the 125 million acres of forest land and on the 100 million acres of range and grasslands comprising the public domain in Alaska. Each person is urged to exercise extreme care in the use of fire and to report all fires immediately to the nearest ranger or fire guard station.

NATIONAL FORESTS

Alaska's two national forests comprise 20,883,400 acres and extend along the coast from Portland Canal on the south to Cook Inlet on the north. The Tongass National Forest of 16,073,200 acres covers most of southeastern Alaska. The Chugach National Forest of 4,810,-200 acres includes the coastal area surrounding Prince William Sound and the eastern half of the Kenai Peninsula.

National forest resources are available for use. Areas needed for waterpower development and other special purposes may be leased. Lands for agriculture, mining, and industrial uses may be patented and tracts may be made available for summer homes. Public recreation facilities are provided and hunting and fishing are fostered. The timber stands are managed in accordance with the principles of scientific forestry and on a basis of sustained yield of output for the support of timber-using industries.

Information released by the United States Forest Service indicates that the total estimated manufactured value of timber products in the Tongass and Chugach national forests for 1955 was $31,282,000. Figures for 1956 placed this value at $34,395,000.

Forest stumpage is sold to individuals and to manufacturing industries. Minimum stumpage rates per thousand board feet are: spruce, $2.50; hemlock, $1; cedar, $1.50. Regulations regarding stumpage rates and the sale of timber for the manufacture of pulp and paper may be obtained from the Regional Forester, Forest Service, United States Department of Agriculture, Juneau, Alaska.

Settlers, miners, and residents may take, free of charge, green or dry timber for their personal use, but not for resale.

Virtually all timber manufactured in southeastern Alaska today is purchased from the Tongass National Forest. The logs produced are manufactured into pulp at the new Ketchikan plant, into plywood at Juneau, or into lumber at a number of sawmills. The larger sawmills are located at Ketchikan, Metlakatla, Wrangell, Juneau, Sitka, and Whittier. A new cedar manufacturing industry is being established at Ketchikan. Many logs in the round are utilized for fish traps and for wharf piling.

Coastal Forest Types and Species

The estimated timber stand is 78,500,000,000 board feet on the Tongass and 6,260,000,000 board feet on the Chugach. Relative importance of the tree species in the total stand is: western hemlock, 73 percent; Sitka spruce, 21 percent; western red cedar, 3 percent; Alaska cedar, 3 percent. Approximately 75 percent of the commercial timber is located within 2½ miles of tidewater along the 12,000 miles of shoreline of the islands and mainland.

Western hemlock is the predominant species in Alaska's coastal forest. It is an excellent wood for a great variety of lumber uses and is superior to eastern hemlock as a pulping wood. It is the foundation of the extensive bleached and unbleached sulfite pulp industry of Oregon, Washington, and British Columbia. Much of the bleached output goes into rayon and cellophane. The wood is moderately strong, light in weight when dry, fine grained, and light in color. It is especially good for flooring.

Sitka spruce supplies a large part of the present Alaska sawmill requirements. It is manufactured into all the usual forms of lumber and into airplane stock. A good all-purpose pulping wood, it compares favorably with white spruce, the standard pulpwood of eastern North America. It is nonporous, has a fine texture and is easy to work or glue. It is an excellent wood for small specialty items.

Western red cedar is used for siding and other high-grade lumber, shingles, and poles. Also, it is usable for sulfate pulp. Light, close-grained, fine-textured, western red cedar is very easy to work and is high in decay resistance, ranking with redwood and southern cypress.

Alaska cedar is not cut extensively at present, but has a high value for specialized uses. Closely related to the Port Oxford cedar of California and Oregon, Alaska cedar has a fine texture, is easy to work, takes a beautiful satin finish, and is extremely durable. Its pronounced cedar odor makes it valuable for clothes closets and cedar chests. Unfortunately, it is scattered, entailing high logging costs.

The Chugach forest timber is available under the same conditions as the Tongass forest and consists of much the same types, except cedar.

ALASKA'S DENSE SPRUCE HEMLOCK FORESTS GROW TO WATER'S EDGE. PINE STRAITS MIDDLE POINT AND TIMBER ON BARANOF ISLAND. (PHOTO—UNITED STATES FOREST SERVICE.)

The forests of southeastern Alaska offer an enormous supply of timber well suited for the manufacture of pulp, lumber, and other products. As evidence of this four large timber sales have been made, or are in process of completion. In each case the individual sale has been designed to support pulp and other mills which require very substantial financial outlays for plant construction. On this account these large sale contracts cover a period of 50 years.

The initial sale, for 1½ billion cubic feet, or 8¼ billion board feet, to Ketchikan Pulp Company was completed in 1951. This company spent more than $50,000,000 on construction of a very modern high-alpha dissolving pulp plant which began producing in June 1954. The next sale was for 3 billion board feet of timber in the Wrangell area. Final award was made to the Pacific Northern Timber Company in June, 1955. Plans call for a small pulp mill, together with a sawmill and plywood plant. In August, 1955, preliminary award of a sale of

7½ billion board feet of timber was made to Georgia-Pacific Alaska Company. This company plans to construct a pulp mill in the vicinity of Juneau. In January, 1956, preliminary award was granted to Alaska Lumber & Pulp Company for 5¼ billion board feet of timber to be cut in the Sitka area. It is expected that a new high-alpha dissolving pulp plant will be built near Sitka.

These 4 large sales will place under contract a total of 24 billion board feet of timber. When the new plants are all operating they will, together with other existing sawmill and plywood manufacturing facilities in southeast Alaska, require an annual total of more than 600 million board feet of timber.

In 1954 a new inventory of the timber on the Tongass National Forest was started. This inventory is designed to provide the information needed for the preparation of sound management plans and to determine with accuracy the amount of timber which can be harvested annually under a program of sustained yield cutting. Until the new figures are available the allowable annual cut of timber is set at approximately 750 million board feet. It is not likely any unusually large new sales will be made until the new timber management plans are completed.

A new era of industrial expansion lies ahead for southeastern Alaska as a result of the growing wood products industries. New pulpmills and other plants will provide stable yearlong employment for many hundreds of people. This will result in substantial population increases and the need for marked increases in service industries and facilities as the new industries become established.

STUDIES

The Alaska Forest Research Center, United States Forest Service, established July 1, 1948, has centered its field studies in Kasaan Bay on the east coast of Prince of Wales Island. Here, in conjunction with the Fish and Wildlife Service, a study is being made of the effect of logging on salmon streams to assure protection of the fisheries. Under the direction of the Research Center and in collaboration with the office of Timber Managament, the Forest Survey is conducting the timber inventory mentioned above.

Pulp timber stands are being studied to determine an accurate method of predicting the quantity and quality of pulp timber that can be grown for the next crop following logging of the present stand. Another study concerns the effect of pruning on second growth timber. In interior Alaska, a study is being made to determine what happens to the vegetation after light and heavy fires.

PUBLICATION

Pocket Guide to Alaska Trees, an illustrated booklet identifying the trees of Alaska, has been revised and reissued by the United States Forest Service, Department of Agriculture. This booklet gives the common and scientific name, describes the tree and its habitat, and explains its economic importance. It is written in nontechnical language and a map of the forest regions in Alaska is included. Individuals may order copies for 25 cents each from the Superintendent of Documents, Washington 25, D. C.

Water

A vast water power potential exists in Alaska, conservatively estimated to be in excess of 50 billion kilowatt-hours annually. Its importance to world economy cannot truly be evaluated. Development of this water power is essential in the future economic welfare of the country. Glaciers, snowfields, permanently frozen ground, extreme variations geographically in the amount and distribution of precipitation, temperature variations, and topography, however, introduce problems in water resource development.

The availability of water for power and water supply is of primary concern. The Geological Survey is engaged in a program of collection of data on the occurrence, distribution, quantity and quality of the surface and ground water resources and on the sediment transported by the streams. These data are necessary to efficient development of local supplies, for the planning of power developments, and for other water-use purposes. The program of water investigations has been directed toward meeting the most urgent needs for general hydrologic information and for local problems in order that appropriate basic data would be available for development purposes.

Surface-water information is being obtained in southeastern Alaska, in the Alaska Railroad belt, and on the Kenai Peninsula in south-central Alaska, in the Yukon and Tanana basins in the interior, and at other scattered locations. Stream-flow data are obtained regularly at 60 locations. Ground-water studies have been concentrated generally in the Anchorage-Kenai and Fairbanks areas, with some ground water work at various locations throughout the Territory. Quality of water and sediment investigations have been limited generally to the Alaska Railroad belt and to the Copper, Tanana, Yukon, and Susitna River basins. Observations are obtained regularly at about 27 locations and intermittent information at many other points.

Records available indicate that the flows of Alaskan streams range from an annual runoff of a few inches in northern and interior Alaska

to more than 200 inches in southeastern Alaska. The higher runoffs generally occur in the coastal areas, particularly in southeastern Alaska and in the Prince William Sound region. Ground-water supplies adequate for domestic and municipal purposes are available at many locations though quantities are variable. At Fairbanks and Anchorage, and at many outlying locations, ground waters provide part or all of the water supplies.

A reconnaissance survey of the potential water resources was made by the Bureau of Reclamation covering an area totaling about 400,000 square miles, or more than two-thirds of Alaska. This survey indicated about 200 potential hydroelectric power sites which could be utilized for providing electric energy and other multipurpose benefits.

The water resources of Alaska under investigation include all the major river basins which traverse the main part of the Territory and countless lakes, for the most part in the southwestern part of Alaska on the Kenai and Alaska Peninsulas.

Investigations and construction are now complete on the Eklutna Project. Investigations recently completed are as follows: Swan Lake near Ketchikan; Lake Dorothy near Juneau; Blue Lake near Sitka; Wickersham north of Fairbanks; and the Susitna River Basin between Fairbanks and Anchorage.

A preliminary report on the international Yukon-Taiya Project which would ultimately provide about 900,000 kilowatts of power in the vicinity of Skagway, has been completed but further studies are required before any final recommendations can be made. Investigations made on other projects in the area are only of a rough reconnaissance nature and cover not more than one half the potential water resources existing in the Territory.

EKLUTNA PROJECT

The Eklutna Project was authorized for construction by Congress under Public Law 628, 81st Congress—July 31, 1950 (64 Stat., 382) as amended August 13, 1953 (67 Stat., 574). The project is in operation and is located in the south central region of Alaska, 34 miles northeast of Anchorage, Alaska. The development involves the diversion of Eklutna Creek situated about midway between Anchorage and Palmer, Alaska. A tunnel taps Eklutna Lake and carries water to the powerplant at Knik Arm Flats. This powerplant has a nameplate rating of 30,000 kilowatts and began initial operation in January 1955. The existing dam at the lake's outlet has been straightened and repaired. Also, a hydroelectric powerplant acquired from the City of Anchorage has a nameplate rating of 2,000 kilowatts and will be operated for emergency use, if required.

Waterpower

The Geological Survey has as one of its functions and responsibilities the classification of public lands with respect to mineral and water resources. In the fulfillment of this responsibility, it is carrying on a program of investigating the waterpower potential of streams and lakes in Alaska.

Field surveys are made to obtain the basic map data for the location of dam sites, reservoir sites, conduit routes, powerhouse sites, the determination of the fall in the stream, and reservoir capacities. Geologic investigations are made to show the conditions that would be encountered in the location, design, and construction of the various features required in a power development.

Utilizing the information obtained from the field surveys and investigations, along with streamflow data, climatic data, and other pertinent information, reports are prepared describing the various possible general plans of development adaptable to the stream or lake under consideration and estimating the power that would be obtainable.

POTENTIAL DAMSITE ON THE SUSITNA RIVER, LOWEST SITE, ABOUT 13 MILES ABOVE GOLD CREEK STATION ON THE RAILROAD, 5 BILLION K. W. H. ANNUAL FIRM ENERGY POWER.

Maps resulting from the field surveys are published as "river survey" maps. These, in general, show the stream valley or lake on a scale of 1 : 24,000 (1 inch = 2,000 feet) with a 20-foot contour interval. Prospective dam sites are usually shown on a scale of 1 : 4,800 (1 inch = 400 feet) with contour interval appropriate to the site. Maps of lakes include underwater contours based on soundings made at the time of the field surveys.

Maps have been published and reports issued for the following streams and lakes:

Eklutna Creek and Lake near Anchorage
Little Susitna River and Cottonwood Creek near Palmer
Ship Creek near Anchorage
Grant, Ptarmigan, Cooper and Crescent Lakes near Seward
Bradley Lake near Homer
Power Creek near Cordova
Crater Lake, Long Lake and Speel River near Juneau
Sheep Creek, Carlson Creek and Turner Lake near Juneau
Scenery Creek, Cascade Creek and Delta Creek near Petersburg

Field surveys have been completed and maps are in preparation for publication for the following streams:

Anchor River
Kasilof River
Kenai River
Juneau Creek (tributary of Kenai River)
Snow River
Lost Lakes near Seward

The objective of the program of waterpower investigations in Alaska is to obtain a complete inventory or catalog of the waterpower potential of the Territory. In this program, priority is given to those areas wherein a need for the information is most likely to occur in the near future and thus contribute to the development of the Territory.

Potential Waterpower Sites

The inventory of potential hydroelectric power development is of necessity rather incomplete. Many potential sites are not included due to the lack of adequate maps and data. This inventory is, however, sufficiently complete to indicate the magnitude of the major undeveloped waterpower resources within the Alaskan territory. The total estimated potential hydroelectric power is about 8.3 million kilowatts. This estimated capacity will generate approximately 46.9 billion Kilowatt hours of firm energy. Although nonfirm energy has not been estimated, it is believed to be of considerable quantity.

Information

Information in connection with the Bureau of Reclamation's activities in Alaska may be obtained from the Alaska District Manager, Bureau of Reclamation, Juneau, Alaska.

Publications

Publications pertaining to waterpower in Alaska are limited. Copies of a report on the Eklutna project are available as long as the supply lasts. Other publications are being prepared. Request for these may be made to the Bureau of Reclamation, Department of the Interior, Washington 25, D. C.

Alaska's Wildlife

The wildlife resources of Alaska are of vital importance as over half the population depends almost entirely on fish and wildlife for existence. Alaska has few citizens who are not concerned directly with these resources. In recent years, the danger of depletion has been accentuated by the rapid increase in population, civilian and military, the opening of new roads through game areas, and the ever-increasing use of airplanes to reach fishing and hunting areas.

Depletion, especially of seals and sea otters, at the time Alaska was purchased by the United States was due chiefly to overexploitation and mismanagement. Russian discoverers of Alaska were primarily interested in the rich harvest of furs and a thriving fur trade had developed. American, English, and Spanish adventurers had "assisted" the Russians in stripping Alaska of fur seals and sea otters and had begun to recognize the importance of beaver, marten, and other fur animals. During succeeding decades, Alaska's fur trade ranked as the chief interest of those who came into the Territory. Later gold, salmon, and timber received attention.

The early abundance of big game animals and game birds—together with salmon, trout, and grayling—furnished a dependable supply of food for explorers and settlers. While it is still true that portions of Alaska could not sustain human populations without reliance upon the land's resources of fur and game animals, it is no longer possible for large numbers of people to live by hunting, trapping, and fishing. Serious inroads have been made on Alaska's wildlife and the pressure of increasing human population and resulting activities make it imperative that wildlife be given greater protection and better management.

While wildlife in Alaska is still worth millions of dollars in cash,

food, and clothing to all residents, one of its greatest future values lies in its utilization as a recreational resource. If careful conservation is practiced, the tourist trade—an industry of increasing economic importance—and students of wildlife will be attracted to Alaska and thousands of permanent Alaskans will look to hunting, fishing, camping, and photography as a source of relaxation and as a means of rehabilitation. Human welfare in Alaska therefore is closely linked with its natural wildlife resources, over which the United States Fish and Wildlife Service, Department of the Interior, is guardian.

BIG GAME ANIMALS

Alaska's big game animals include the bears, moose, caribou, Sitka black-tailed deer, Dall mountain sheep, Alaska mountain goat, the re-established muskoxen, and two recently introduced species, the elk and bison. In addition to these species the reindeer was introduced as a domestic animal and now runs wild and mingles with the herds of caribou in some places.

Bears

The best known of Alaska's big game animals are the bears, which are found in the Territory in greater number than in any area in the world. Brown bears, represented by several subspecies, are found along the coast and the closely allied grizzlies are found in the interior mountain ranges. Other species include the black bears with their brown and glacier-bear color phases, and the snow-white polar bears from the ice packs that periodically move down the Arctic and Bering Sea coasts. The brown and grizzly bears are found as far west as Unimak Island and heavily populate the Admiralty, Baranof and Chichagof Island group, the Kodiak-Afognak group, and the Alaska Peninsula. An unusual grizzly bear is the medium-sized Toklat, ranging from the Tonzona River eastward to the Johnson River. This bear's coat is fine and silky, creamy white on the back and reddish brown on legs and underparts. The most sought-after trophy of big game enthusiasts is the great Alaskan brown bear found mainly on Kodiak Island and the coastal region. This bear, the largest of all carnivorous animals, sometimes weighs a ton and measures 13 feet over-all and has a range of not less than 100,000 square miles.

Moose

Moose in Alaska have been increasing in numbers because of the pasturage provided by the abundant new growth of browse that springs

up in the wake of numerous recent forest fires. The upward trend in moose populations cannot be expected to continue, however, as the new-growth forests gradually will mature and no longer will provide browse for the animals. The numbers of moose have decreased around airfields and other newly populated areas. Some are in southeastern Alaska and in the central and southern valleys. A small variety of moose occupies the northern part of Alaska above the Arctic Circle. The variety that inhabits the Yukon flats and the Kenai Peninsula is the largest in existence.

Caribou

Vast herds of caribou once ranged the tundra, but excessive grazing by imported reindeer, unrestricted hunting by natives, and wolf depredations have reduced their numbers drastically. In spite of these factors, the caribou remains one of the most numerous of the big game animals and one of the major attractions of the wilderness. They are in the central and southern valleys and on the tundra in the Arctic area.

Sitka Black-Tailed Deer

This species of deer is found on the timbered islands of southeastern Alaska and is distributed thinly along the adjacent mainland. The black-tail is a small, elusive deer that glides into the forests instead of bounding into the open at the approach of hunters.

Dall Mountain Sheep

White mountain sheep are still relatively plentiful in large sections of the Brooks Range, along certain parts of the southern coast such as the Kenai Peninsula, in the Talkeetna Mountains, and in the Nutzotin and Wrangell Mountains. Once quite abundant, excessive hunting has threatened the survival of the species in many areas and hunting the animals is closely regulated.

Alaska Mountain Goat

This bewhiskered and interesting animal is found in some of the mountains of the southern coast between Portland Canal and the head of Cook Inlet. Survival is provided for the species in much of its range by the establishment of game preserves prescribed by law.

Muskoxen

The reintroduction of the muskox to Alaska, after its extinction about a century ago, was accomplished in 1930. At one time the shaggy-coated muskox was distributed fairly well along the Arctic coast. Because of its fearlessness, the muskox was exterminated following the introduction of firearms into the country by early whalers and traders. A herd of 34 animals, captured in Greenland, was brought to Fairbanks in 1930 and later placed on Nunivak Island in the Bearing Sea by the Fish and Wildlife Service. The herd has more than doubled in size since its introduction.

Elk

A shipment of eight Roosevelt elk, liberated on Afognak Island in 1927, has resulted in a large and growing herd. The neighboring island of Kodiak also may be stocked with animals from this herd at some future time to forward experiments toward utilizing grasses and browse not relished by the native game animals.

Bison

In 1928 a herd of 23 bison was moved from the National Bison Range in Montana to the Big Delta region of Alaska. Today the herd numbers several hundred animals which have proved capable of surviving the extremely cold winters. The buffalo are not confined and are free to occupy as much of the Alaska Range as is suitable. Recently a small herd was transported from Big Delta to the Upper Copper River area.

Reindeer

Reindeer, not classified as wildlife because they are a semi-domesticated relative of the caribou, formed one of the earliest and most successful examples of stocking in Alaskan history. To provide a dependable source of meat supply for the Eskimos and other residents of northwestern Alaska, a total of 1,280 reindeer was brought from Siberia between 1891 and 1902. Reindeer breeding, however, has had its difficulties since they were first introduced. Under close supervision, the numbers increased rapidly in virgin feed areas until the number was estimated to be 500,000 to 600,000 in the early 1930's. Thereafter, the number decreased rapidly, due largely to the increase of depredation by wolves, over-grazing in certain areas, and lack of profitable markets for the products. Interest waned in reindeer breeding which resulted in increased losses from wolves and, in some districts, losses from mixing with caribou herds.

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FUR SEALS. ST. GEORGE ISLAND, ALASKA.

Reindeer constitute the main economic resource in western and northern Alaska, as they furnish food, clothing, and bedding. Government herds range at Kotzebue, St. Michael, Nunivak Island, Atka Island, Umnak Island, and the Pribilof Islands. Reindeer in Alaska are under the jurisdiction of the Bureau of Indian Affairs and purchases of live reindeer for export must be approved in writing by that agency. Nonnatives are no longer permitted by law to own reindeer in the Territory.

FUR ANIMALS OF THE SEA—SEA MAMMALS

Fur Seals

The fur seal herd is national property and comprises 80 percent of all the fur seals in the world. Each summer the fur seal herd returns from the open waters of the Pacific Ocean to breed on the Pribilof Islands. It is managed by the Fish and Wildlife Service, United States Department

of the Interior, for the account of the Federal Government. Since 1910 the fur seals, and more recently seal meal and oil, have brought into the Federal treasury over 35 million dollars, which has resulted in a profit of 20 million dollars. This is an example of a resource depleted by imprudent hunting and restored through good management.

When the Pribilof Islands were discovered in 1787, the number of seals in the herd approached 3 million animals. During the next century, intensive sealing reduced the herd almost to extinction. Consequently, the annual catch declined from 165,000 in 1868 to 13,000 in 1910. This was chiefly the consequence of pelagic sealing, or killing the seals at sea, which resulted not only in the death of the mother seals but also of the pups from starvation. In order to reestablish the fur seal herd, the United States Government took over its direct management in 1910 and on July 7, 1911, the United States, Great Britain, Russia, and Japan reached an agreement known as the North Pacific Sealing Convention, which outlawed pelagic sealing. Japan, claiming that the seals were damaging her fishing industry, abrogated this agreement on October 23, 1941. In December 1942 the United States and Canada signed a temporary agreement to protect the fur seals until a new treaty could be drawn.

Fur Seal Management

World War II interrupted a project, which has been resumed, for an extensive scientific study of the migratory and feeding habits of fur seals, their relationship to the fisheries, and other economic factors. It is important to the United States that these studies be continued from the standpoint of international relations, revenue from products of the herd, and perpetuation of a valuable natural resource. Management of the fur seals was planned with a view to restoring a nearly extinct herd. Now the greatest need is insurance of the maximum utilization of a herd that seems to have reached the optimum size under changed conditions. This can be realized by continued scientific study and well planned management. Utilization at present consists of maximum use of skins and byproducts obtained by planned fur sealing operations.

Operations begin in the Pribilof Islands, usually in June or July, when the fur seal family groups occupy the rookeries and the immature males are more or less completely segregated in "bachelor pods" on adjacent areas. From these hauling grounds the male seals selected for killing, chiefly three-year-olds, are driven inland a short distance where killing is under the supervision of agents of the Fish and Wildlife Service. Slaughtering and skinning is done by Aleuts who live permanently on St. Paul and St. George Islands. A private company in St. Louis, Missouri, under contract with the Government, cures,

dresses, dyes, and finishes these skins. After this processing, the skins are sold at public auctions held twice yearly in St. Louis and the net proceeds are transferred to the Treasury. Approximately 67,000 skins are taken annually. Extracting the byproducts, meal and oil, is done by the Aleuts on Pribilof Island and is supervised by the United States Government. The meal is used as an ingredient in poultry feed and the oil has many industrial uses.

In 1956, a total of 122,826 fur seal skins were taken at the Pribilof Islands. During the fiscal year 1957, two public auction sales of fur seal skins were held at St. Louis, Missouri. Gross receipts from these sales were $5,262,034.

Byproducts of the fur seal industry in 1956 included 88,270 gallons of fur seal oil and 626,084 pounds of meal. Gross receipts to the Government from the sale of this material was $105,229.

Sea Otters

Sea otters, once abundant along the Pacific coast from southern California to the western end of the Aleutians in Alaska, were the objects of intensive hunting during the Russian occupation of Alaska. Russian, American, and English traders engaged in sea otter raids and high handed piracy in an effort to amass fortunes from the sale of their skins. Sea otter pelts were valued at from $500 to $2,000 each. Many were worth their weight in gold, especially to the Chinese mandarins who trimmed their garments with the luxurious fur as a badge of office. By the time the United States acquired Alaska, these much sought-after mammals had been reduced nearly to extinction.

In a few widely scattered places along the coast little groups of the animals survived, closely watched and secretly guarded by Federal agencies responsible for their protection. Due to lack of funds for adequate patrol of the areas, these agencies could do little for the animals except to maintain secrecy about their location. Regulations restricting the killing of sea otters prescribed by the Secretary of the Treasury continued until 1910 when killing these animals was outlawed completely. By 1950 the number of sea otters in Alaska had shown a definite increase. Steps have been taken to transplant small colonies of otters to new locations where a suitable habitat exists.

LAND FUR ANIMALS

Mink, blue, red, and white fox, muskrat, beaver, marten, and lynx are Alaska's most important fur animals. Next in importance are cross and

silver fox, land otter, weasel (ermine), wolf, wolverine, coyote, polar bear, and black bear. Marmot, hare, and squirrel are of lesser value.

Land fur animals are the basis for the major part of the income earned by hundreds of Indians, Eskimos, and Aleuts. Although many native people have developed other ways of making a living, trapping, hunting, and fishing are the principal sources of food, clothing, and eventual cash income. (For domestic fur animals—see Fur Farming.)

Mink, wild or ranch raised, is the most valuable of the land fur animals. Wild mink is distributed widely south of the Brooks Range. Approximately 40,000 pelts of this semi-aquatic animal are exported annually from trapping and farming combined.

Foxes make up part of the fur export, although the demand for long-haired furs is negligible. The decrease in demand has worked a hardship on the Eskimo population of the Arctic coast because they have almost no other source of cash income except the white fox. The fur of the wolverine is prized highly by the Eskimos for parka trimming.

Trapping

Today trapping is one of Alaska's principal industries, but southeastern Alaska is overtrapped to the extent that every two or three years it is necessary to declare a closed trapping season. The beaver population sustains trapping only about one season in four or five and the marten only one of two seasons in five. Trapping restrictions would be more severe if more trappers entered this industry.

Current Alaska game regulations and information as to open areas for hunting or trapping wild animals may be obtained from the Administrator, Alaska Wildlife Resources, Fish and Wildlife Service, Juneau, Alaska.

FUR FARMING

Mink, blue, and silver fox and their various newly developed color variations are the most popular domestic animals now being raised in Alaska. Domestic animals are defined by law as being fox, rabbit, mink, chinchilla, marten, fisher, muskrat, karakul, and all other fur animals raised in captivity for breeding or other useful purposes.

Many fur-farming ventures have been started in Alaska, but due to adverse factors of poor markets, high costs, and disease, only 18 are still licensed and operating in the Territory.

Information on the production, conservation, and utilization of wild fur animals may be obtained from the Fish and Wildlife Service, United States Department of the Interior, Washington 25, D. C.

From the Arctic coast to the tip of the Aleutian chain and to the southeastern boundary of Alaska, each species of migratory waterfowl is able to find a nesting ground to its liking. Vast expanses of tundra, muskeg, and river bottom with their myriad potholes, lakes, and sloughs provide nesting sites. The most outstanding single nesting area is the coastal tundra region between the mouths of the Yukon and Kuskokwim Rivers. It is a haven for black brant and cackling geese, in addition to other ducks and geese. Probably the most numerous species nesting in this ideal nesting ground on the Yukon delta is the black brant. Further inland are pintails, baldpates, mallards, green-winged teal, and white-fronted and lesser Canada geese. The tree-nesting American golden-eye also is abundant, while further north lesser snow geese and four species of eider ducks nest.

Although migratory waterfowl leave by September, the Territory is not entirely deserted of ducks and geese during winter. Scoters, eiders, scaup, and other sea ducks winter in sheltered bays from the Aleutians through Prince William Sound to southeastern Alaska. Mallards and some pond ducks and geese remain in southeastern Alaska during the winter.

Alaska's most beautiful goose, the emperor, never leaves the country except as a rare straggler. It nests along the Bering Sea tidal lands and winters in the Aleutian Islands.

The largest species of waterfowl in North America, the trumpeter swan, once on the verge of extinction and still alarmingly rare, sometimes winters in southeastern Alaska, and breeds at two localities.

Shore and water birds swarm into the Territory for the summer. The little brown crane is the largest of this group and is joined by Wilson's snipe, yellow-legs, willets, dowitchers, phalaropes, sandpipers, loons, grebe, and others. The godwit that winters in Australia, the golden plover from New Zealand, and the bristle-thighed curlew from Tahiti also are in this multitude.

Sea Birds

Literally millions of sea birds frequent the rocky islands and rugged headlands of Alaska each summer to nest and to rear their young. Murres, auklets, kittiwakes, guillemots, puffins, petrels, fulmars, and shearwaters fill the seascape. Many of these winter in an area reaching far from their breeding grounds southward.

Upland Game Birds

Bird shooting in Alaska so far has been incidental to other types of hunting, but 7 species of grouse, including 3 ptarmigan, offer excellent

shooting. The ptarmigan, which may be seen in flocks of several hundred, and the grouse, which moves about singly or in family-sized groups, are important food for the trapper, prospector, or explorer.

Song Birds

Alaska has only a few song birds in winter, but in summer great numbers appear from wintering localities in the United States or southward. Robins, the most common, thrushes, warblers, sparrows, swallows, and wrens are some that are familiar in the United States. Common Alaskan-tundra breeders include the brown and white snow bunting and the friendly longspur. The year-round birds are the jays, ravens, woodpeckers, pine grosbeaks, chickadees, siskins, waxwings, and redpolls.

Birds of Prey

Alaska also has a number of birds of prey. The largest species are the bald eagle, favoring the coastline, and the golden eagle, inhabiting the interior mountains. On the northern tundra are the snowy owl, gyrfalcon, peregrine, rough-legged hawk, and the short-eared owl. Among Alaska's birds of prey are 10 species of owls, 7 of hawks, 4 of falcons, 3 of jaegers, and the osprey.

WILDLIFE REFUGES

Wildlife sanctuaries have been established to protect, preserve, and restore various species of wild birds and animals. The sanctuaries include all the national parks, national monuments, national wildlife refuges, management areas, and "no hunting" reservations that are established by regulations upon recommendation of the Alaska Game Commission. These regulations provide a flexible means of management as they permit closing local areas to hunting or trapping when necessary. Areas are closed where hunting or trapping pressure has become too heavy, if a species requires special protection, or where land utilization practices are undertaken in an effort to encourage an increase of desirable game species. Total area included in wildlife sanctuaries in Alaska, excluding management areas, is 21,736 square miles. Additional national refuges have been approved by the Alaska Game Commission and are in process of withdrawal from the public domain. Simeonof Island for sea otter, when established, will be an absolute sanctuary. Cold Bay and Morzhovoi Bay for protection of migrating and wintering geese and the Yukon delta for nesting geese and ducks, when established, will be operated as management areas where hunting

and trapping will be permitted in accordance with existing laws. These refuges will be on land unsuitable for other uses.

The following national wildlife refuges have been established:

Aleutian Islands Refuge

This is a chain of islands extending westward 1,200 miles from the Alaska Peninsula. This refuge, largest in the entire system, is maintained for the protection of native birds and game animals, the encouragement of fisheries, and the propagation of fur animals. It is within this refuge that the rare sea otter is making its recovery. Blue foxes are raised for their skins on many of the islands. Unimak Island, having an area of 1,560 square miles, is important from the standpoint of perpetuating Alaska brown bear.

Bering Sea Refuge

This refuge includes St. Matthew and Hall Islands and Pinacle Islet and is situated about 220 miles north of the Pribilof Islands. Arctic foxes, represented mainly by the normal phase, which turns white in winter, are found in large numbers on this refuge. The rare and beautiful McKay's snow bunting breeds nowhere except on this refuge and the Pribilof sandpiper breeds better here than in any other locality.

Bogoslof Refuge

The small volcanic Bogoslof Islands in the Bering Sea, approximately 40 miles north of Umnak and Unalaska, is the location of this refuge. It is noted for its large colonies of sea lions and as the home of millions of murres.

Chamisso Island Refuge

Consisting of Chamisso Island, Puffin, and other nearby rocky islets in Kotzebue Sound, this refuge includes one of the most important breeding rookeries for Arctic birds along the northwest coast of Alaska. Species found here include horned puffins, pallas murres, Pacific kittiwakes, and Point Barrow gulls.

St. Lazaria Refuge

This refuge is located at the entrance to Sitka Sound, about 30 miles west of Sitka, and is the breeding place of certain sea birds.

Forrester Island Refuge

This refuge includes Forrester and Lowrie Islands, as well as Wolf and other adjacent rocks which lie in the Pacific Ocean west of Ketchikan. It is the breeding place of various kinds of sea birds.

Hazen Bay Refuge

This refuge is in Hazen Bay, north of Nelson Island near the north entrance of Baird Inlet off the west coast of Alaska. It comprises the islands of Nunivakchak and Krigegak. Black brant, white-fronted, Emperor, and cackling geese nest on these islands, as well as swans, glaucous gulls, greater scaups, old-squaws, and large numbers of eider ducks.

Hazy Islands Refuge

This reservation is in southeastern Alaska approximately 100 miles north of Forrester and is a breeding place for numerous sea birds.

Kenai Moose Range

This refuge was established to protect the giant Kenai moose on the northwest side of the Kenai Peninsula. The moose in this area present an unusual opportunity for the study of the practical management of a big game species in its natural environment that has considerable local economic value. Regulated hunting is permitted in accordance with the Alaska Game Law.

Kodiak Refuge

Occupying the central part of Kodiak Island, this reservation provides a preserve for protecting the natural feeding and breeding ranges of the brown bears and other wildlife on Kodiak and Uganik Islands. Regulated hunting is permitted within the preserve in accordance with the Alaska Game Law. Establishment of this refuge is expected to safeguard a valuable natural resource against exploitation.

Nunivak Island Refuge

This reservation is in Bering Sea off the west coast of the mainland and was set aside originally for the use of the Department of Agriculture to conduct experiments in crossing and propagation of reindeer and native caribou and as a refuge for native birds, wild game, and fur animals. The herd of muskoxen brought from Greenland to Fairbanks in 1930 later was transferred to this refuge by the Fish and Wildlife Service.

The number of reindeer on this refuge is estimated at 4,000 animals. It is believed that the herd should be reduced and held to about 3,000 head of breeding animals for several years in order that the winter feed be given a chance to come back where it has been overgrazed.

Pribilof Reservation

This area includes Walrus and Otter Islands east and south, respectively, of St. Paul Island, the central island of the Pribilof group, which is noted for its fur seals. These islands contain some of the greatest sea bird colonies in Alaska.

Semidi Islands Refuge

Lying in the north Pacific Ocean southeast of the Alaska Peninsula, this refuge includes the islands of Aghiyuk, Chowiet, Keteekuk, Anowik, Kiliktagik, Sukik, Aghi, Aliksemit, and South. Colonies of puffins, auklets, and petrels inhabit this refuge.

Tuxedni Refuge

Embracing Chisik, Egg, and other small islands in Tuxedni Harbor, Cook Inlet, this area was set aside as a breeding ground for native birds.

Other Sanctuaries

Wild animals and birds also are protected by the National Park Service in the Mt. McKinley National Park, Katmai National Monument, and the Glacier Bay National Monument. In addition to the sanctuaries for wildlife provided through national wildlife refuges, national monuments, and the national parks, extensive areas have been closed by regulations under the Alaska Game Law to prohibit the hunting or taking of all species of game, fur animals, and game birds, or for the protection of certain species.

WILDLIFE PROTECTION

For many years, game law enforcement in Alaska was a somewhat haphazard undertaking, divided among several Federal agencies delegated by Congress to administer the laws. These laws were inadequate and gradually became obsolete and impracticable to enforce. Under these conditions, game and land fur animals were diminishing in numbers in many sections of the Territory. The excessive killing of beavers and the overtrapping of marten endangered the future of these

valuable fur animals It was highly important that adequate perpetuation of the various species of wildlife be provided.

In 1925 Congress passed the Alaska Game Law setting up a Game Commission to function as the operating agency of the Bureau of Biological Survey, now a part of the Fish and Wildlife Service, United States Department of the Interior, in the formation and enforcement of suitable regulations for managing the wildlife resource in Alaska. The Alaska Game Law, as amended, provides that the Secretary of the Interior shall appoint a Game Commission composed of five members, of which four are required to be representative residents of Alaska—one from each of the four judicial districts—and who are non-Federal employees. The fifth member of the Commission is the wildlife representative of the Fish and Wildlife Service in Alaska and is the Executive Officer of the Commission. The general administration of the Alaska Game Law is largely the responsibility of the Fish and Wildlife Service, but the law provides that upon consultation with, or upon recommendation from, the Commission, the Secretary of the Interior may issue suitable regulations governing the taking, possession, and transportation of game animals, fur animals, game birds, and game fishes in Alaska. The Commission meets annually, at which time it proposes for action by the Fish and Wildlife Service and the Secretary of the Interior, such regulations as seem advisable respecting hunting seasons, bag limits, establishment of game and fur districts, and designation of areas as wildlife sanctuaries. It formulates general plans for regulatory work to be carried out under the direct supervision of the Executive Officer and makes recommendations for action on such matters as restocking of game lands, introduction of new species, predatory animal control, and wildlife research. Enforcement of the Alaska Game Law also is the responsibility of the Fish and Wildlife Service. This administrative arrangement has proved satisfactory and through untiring efforts the Alaska Game Commission has helped to bring about a wholesome respect for the game laws and widespread cooperation in law enforcement from the residents of Alaska.

Hunting Regulations

Copies of the current hunting regulations and information regarding resident, nonresident, registered guide service and alien licenses, may be obtained from the Administrator, Alaska Wildlife Resources, Fish and Wildlife Service, Juneau, Alaska.

Protection from Predators

Wolves and coyotes inflict serious damage to valuable species of big-game animals and game birds. Wolves always have been present in

Alaska, but coyotes have followed the first white settlers and have extended their range gradually so that they are established firmly and threaten to invade any part of the country wherever an adequate food supply exists.

In areas where excessive damage is done to reindeer and game animals by wolves and coyotes, the Fish and Wildlife Service engages in control activities to protect them and other forms of wildlife. The methods used to destroy the predator animals are carefully placed poisoned bait, set traps, and hunting by airplane.

FUTURE NEEDS

Wildlife is one of Alaska's greatest resources, but it is not inexhaustible. The greatest needs in this conservation program are increased public support, more trained personnel, and additional scientific study. The supply of fur and game animals, waterfowl, and upland game birds can be maintained for many years. As civilization changes the nature of the primeval forests and tundra, opportunities will be extensive for trained game managers with an understanding of wildlife relationships to plan, preserve, and help rehabilitate the great wilderness resources of Alaska's fur and game animals. Prime examples, which give hope to this belief, are found in the rehabilitation of beaver from Texas to Wyoming, wild turkey in the south and west, bighorn sheep and mountain goats in Washington, Oregon, Idaho, and Montana, the fisher in Maine, and the marten in Montana. All of these animals once seemed doomed to extinction in the face of advancing civilization.

The Fish and Wildlife Service, the Alaska Game Commission, the Wildlife Management Institute, and the University of Alaska are conducting additional research work in Alaska with the object of determining the best means of developing and perpetuating the wildlife resources.

Land

ABOUT 80 percent of the land and natural resources of Alaska are under the jurisdiction of the United States Department of the Interior. The major portion of the land is open to location, settlement, selection, or application under the general public land laws. Approximately 2,600,000 acres have been surveyed under the Federal rectangular system of surveys and as special surveys by metes and bounds.

Acquisition of Land by Individuals

Applicants for surveyed public lands in Alaska should apply to the Land Office, Bureau of Land Management, for the land district in which the lands are located. Settlement claims and location notices on unsurveyed lands must similarly be filed in the Land Office for the land district involved. The Anchorage Land Office administers lands in the First and Third Judicial Divisions, and the Fairbanks Land Office administers lands in the Second and Fourth Judicial Divisions of the Territory.

Inquiries concerning current information as to available tracts, except in the Matanuska Valley, should be directed to the Manager, Anchorage Land Office, Bureau of Land Management, Box 1470, Anchorage, Alaska, or Manager, Fairbanks Land Office, Box 110, Fairbanks, Alaska, depending on which land district the land may be located in. Inquiries concerning lands in the Matanuska Valley should be directed to the Alaska Rural Rehabilitation Corporation, Palmer, Alaska (see Matanuska Valley).

Homesteading

All unappropriated and unreserved public lands in Alaska adaptable to any agricultural use, not mineral or saline in character, not occupied for the purpose of trade or business and not within the limits of an incorporated city or town are subject to homestead settlement, whether the lands are surveyed or not.

Under the homestead law, qualified persons may acquire up to 160 acres of land by living on it for 3 years and by building a habitable house and bringing at least one-sixteenth of the area under cultivation within 2 years and a total of one-eighth under cultivation by the end of the third year. After 14 substantially continuous months of residence on the land during the first and second entry years, the homesteader may, if he chooses, commute his entry before the end of the second entry year by paying $1.25 per acre, and thus advance the date of title issuance. No charge is made for the land if the homesteader resides on the entry 3 years and fulfills the other requirements.

Honorably discharged war veterans receive certain credit toward the homestead residence required by the law, as stated under "Veterans' Rights." Veterans of wars other than World War II and the Korean Conflict may also be entitled to some relief from cultivation requirements.

In national forests the regulations are the same except that the land to be homesteaded must have been classified as agricultural in character and declared open for settlement. No commutation through payment is permitted on national forest land, and residence of at least 3 years is required.

Homesites

Under the homesite regulations, any citizen of the United States 21 years of age, whose employer is engaged in trade, manufacturing, or other productive industry in Alaska, or who is himself, engaged in such business, may purchase one claim, on which he actually maintains his residence or headquarters, not exceeding 5 acres, of nonmineral land in the Territory at $2.50 per acre, but for not less than a minimum of $10.00. An applicant for such tract is required to pay the cost of the survey.

Similarly, any citizen of the United States after occupying land in Alaska as a residence or headquarters in a habitable house not less than 5 months each year for 3 years, may purchase such tract, not exceeding 5 acres, if nonmineral in character, at $2.50 per acre, but for not less than a minimum of $10.00. Such applicant is not required to pay the cost of the survey. Honorably discharged war veterans receive credit toward the homesite residence required by the law dependent upon their length of service (see Veterans' Rights).

Small Tracts

Under the Small Tract Act of June 1, 1938, as amended, parcels of land up to 5 acres in size may be classified for lease or sale as residence, recreation, business, or community sites, whether surveyed or unsurveyed. Any citizen of the United States, as well as partnerships, associations, corporations, and governmental subdivisions are eligible to apply for small tracts. Disposal of lands in Alaska under this act has become very popular and many tracts have been made available near population centers, along transportation routes, and on lands having recreational value.

Grazing Leases and Permits

Leases and permits for livestock other than reindeer may be issued for such areas of unreserved public lands as may be authorized by the Secretary of the Interior. Leases are issued to qualified livestock operators in accordance with proposed plans of development for periods up to 20 years at annual grazing fees based upon economic and physical factors commensurate with the animal carrying capacity of the lands within the leased area. Free use permits are also issued for grazing small numbers of livestock kept for domestic purposes. To date, interest in commercial grazing has been chiefly centered on lands on Kodiak Island and other islands of southwestern Alaska.

Purchase of Lands

Under the Alaska Public Sale Act, tracts of public lands not exceeding 160 acres in size, and not within national parks, national forests, military reservations, or claimed by Indians or Eskimos, which have been classified as suitable for industrial or commercial purposes, including housing projects, may be sold at public auction. Lands may be classified, among other uses, for following types of enterprises:

1. Industrial sites for manufacturing, fabricating, processing, or warehouse storage.
2. Commercial sites for retail and wholesale merchandising and distribution; transportation facilities and maintenance shops; fur farms for penned animals.
3. Housing sites for apartments, detached and semi-detached dwellings on a project basis of not less than five dwelling units; hotels, recreation resorts, overnight lodges, and motor courts.

Information may be obtained from the Alaska Operations Supervisor, Bureau of Land Management, Box 480, Anchorage, Alaska.

Land purchases in Alaska may of course also be made directly with private land owners, and occasionally it is possible to purchase a farm,

including improvements, from the Alaska Rural Rehabilitation Corporation, Palmer, Alaska (see Matanuska Valley).

Additional Information

Bulletin No. 2 entitled: "Information Relative to the Disposal and leasing of Public Lands in Alaska" contains information on homesteading and the acquisition of public lands under applicable laws. This bulletin may be obtained from the Alaska Operations Supervisor, Bureau of Land Management, Box 480, Anchorage, Alaska.

Financial Aid to Settlers

Persons owning or purchasing patented homesteads or purchasing private farm lands in Alaska have several sources of credit available to them. The Alaska Rural Rehabilitation Corporation, with an office at Palmer, the Farmers Home Administration with an office at Anchorage, and the local banks. Loans from the FHA for farm ownership and development, as well as production and subsistence loans, carry the same requirements in Alaska as they do in any of the States. Loans from the ARRC are made for production and land clearing purposes. It is sometimes possible to purchase the equity from a private farmer and assume a balance of the contract with the ARRC. Loans from this organization are made on much the same basis as bank loans except that they are available for longer terms and at a slightly lower interest rate. Private banks have liberalized their policy on agricultural loans in recent years, but funds usually are available only to well-established farmers or to exceptionally promising homesteaders developing farms.

The Territorial Legislature has authorized and appropriated funds to be used for settler and development loans. These loans are administered by the Alaska Commissioner of Agriculture and a special board.

Maps of Alaska

MAPS AND CHARTS of various types published by United States Government agencies are available. The most complete general maps of Alaska are large five-color maps, Alaska Maps B and E, published by the Geological Survey, United States Department of the Interior. Compiled from data obtained from ground surveys and aerial photographs, these maps show the location of principal mountain ranges, streams, cities, towns, settlements, railroads, highways, landing fields, glaciers, islands, political boundaries, and other features, providing important information on large areas previously unmapped or shown only in a generalized manner. Map B comes in both a plain and a contoured edition and is on the scale of 25 miles to the inch. There are two sheets, each 51 by 36 inches, which when combined make a large map 51 by 71 inches. Map E is a slightly smaller map published in one sheet 34 by 48 inches on the scale of 1:2,500,000 or approximately 40 miles to the inch. This map is available in both plain and shaded relief editions. Map B is $1, either plain or contoured edition; Map E is 50 cents for contoured edition and 75 cents for the shaded relief edition.

Another general map of Alaska is Map A, a black and blue map, 17 by 21 inches, based on the same data as maps B and E. This map on the scale of 1 : 5,000,000, or approximately 80 miles to the inch, costs 10 cents per copy.

Alaska Map C, a small black-and-white base map with highways in red, is 10 by 15 inches and sells for one cent per copy.

Topographic Maps

The Geological Survey has completed a series of reconnaissance maps consisting of 153 topographic maps of Alaska at the scale of 1:250,000. Many of the maps are available also in a shaded relief edition on which

the relief is shown both by brown contour lines, as on the regular topographic map, and by shading in brown which gives the map the appearance of a model of the land surface. The shading makes the shape of the land surface more readily apparent to the inexperienced map reader than do the contour lines alone. The price of each map of either edition is 25 cents.

Another series of topographic maps on the scale of 1:63,360 (one inch to the mile) is being prepared to cover certain areas including Seward Peninsula and most of central and southeastern Alaska. Nearly 400 maps of this series have been published.

Previously, more than 50 topographic maps were published, on various scales, covering areas within Alaska. Although those maps are being discontinued as the areas are covered by maps of the new series, many still are available. A free index is available showing the areas covered by maps in each of the series, with their prices. The maps may be purchased, and the index may be obtained from the United State Geological Survey, Washington 25, D. C.; Denver Federal Center, Denver, Colorado; from the Alaska Distribution Unit, United States Geological Survey, 520 Illinois Street, Fairbanks, Alaska; or over the counter from the Survey's Office at 210 Glover Building, Anchorage.

Geologic Maps

As a result of exploratory, reconnaissance, and detailed geologic mapping projects, geologic maps have been published covering almost half of Alaska. For the most part the geologic maps are not published separately, but are included in reports covering specific areas.

Aeronautical Charts

The aeronautical charts of Alaska issued by the United States Coast and Geodetic Survey, Department of Commerce, are specially designed for official use in air navigation, emphasis being given to features of aeronautical importance. These charts are published at a uniform scale with contours and are useful for other purposes.

Planning chart AP–2, which covers all of Alaska on the scale of 1 : 5,000,000 (78.91 miles to the inch), shows relief by contours and gradient tints, streams, lakes, principal cities and towns, and certain aeronautical data. The price is 40 cents per copy.

Alaska is also covered by 15 charts of the World Aeronautical Chart series, on the scale of 1:1,000,000 (15.78 miles to the inch), showing relief in the same manner but in greater detail. For use as base maps, the charts of this series, as well as planning chart AP–2, may be obtained without the aeronautical overprint.

Pilotage charts, covering approximately two-thirds of Alaska, pub-

lished by the United States Air Force, are distributed by the United States Coast and Geodetic Survey, Department of Commerce, Washington 25, D. C. at 25 cents per copy. These maps are on the scale of 1 : 500,000.

Up-to-date information and indexes for the various series of aeronautical charts, together with the names of local sales agents may be obtained without charge from the U. S. Coast and Geodetic Survey, Department of Commerce, Washington 25, D. C.

Nautical Charts

Nautical charts covering the coastal waters of Alaska have been published at scales ranging from 1 : 80,000 to 1 : 400,000. Harbor charts of the principal harbors are available at various scales from 1 : 10,000 to 1 : 40,000. These charts also may be purchased from the United States Coast and Geodetic Survey, Department of Commerce, Washington 25, D. C. A separate catalog showing the location, size, scale, and the price of each of these charts, as well as the means of local sales agents, is available without charge from that agency.

Land Survey and Forest Maps

Maps of the Tongass and Chugach National Forests showing roads, railroads, streams, and mountain summits, but no topography, are published by the United States Forest Service for administrative use. Single copies of these maps may be obtained when available from the United States Forest Service, Department of Agriculture, Washington 25, D. C., or from the Regional Forester, United States Forest Service, Juneau, Alaska.

Aerial Photographs

Many areas in Alaska have been photographed from the air. Information regarding coverage of any specific area and the name of the agency holding the film may be obtained by writing to the Map Information Office, United States Geological Survey, Department of the Interior, Washington 25, D. C.

Alaska Highway

Information and maps on travel to and in Alaska may be obtained on request from the touring services of many oil companies. Information regarding travel on the Alaska Highway through Canada may be obtained from the Department of Northern Affairs and National Resources, Ottawa, Ontario, Canada. Inquiries concerning travel on the highway within Alaska should be directed to the Regional Engineer, Region 10, Bureau of Public Roads, Juneau, Alaska.

Recreation

OF THE MANY INDUSTRIES and resources in Alaska which invite development, one of the greatest single opportunities is in travel and recreation.

The World War II overland connection, via the Alaska Highway between the Territory and Canada and the United States, has been improved constantly by American and Canadian highway authorities. The Hart Highway between Dawson Creek and Prince George has been opened to travel as a shorter route to the West Coast. Civilian interest in the improvement of all of Alaska's roads, public lodgings, and eating places, and in the appropriate conditioning of parks, recreation areas, camp and picnic grounds, and other places offering possibilities for supplying the needs of the vacationist has been stimulated greatly.

Some building in the form of accommodations for the traveling public has been and is being accomplished along the Alaska Highway and its connecting road systems over which travel to and from the "Outside" now can be accomplished by automobile during any month of the year. Service stations for gasoline and minor repairs offer the traveler security and adequate fuel supply. In view of the problems faced by today's investors in Alaska enterprises for the traveler, it is encouraging to find substantial community growth along the roads. Tok Junction, Glenallen, and Buffalo Center are examples. Public Law 507, approved May 4, 1956 (70 Stat. 130), authorizes Federal assistance in developing campgrounds and other recreation facilities during the period July 1, 1956, to June 30, 1961.

The old-time roadhouses are giving way to more modern facilities, just as the old sled roads have given way in almost all instances to motor routes and to the landing strips and improved airports of the flying service. Several new hotel and motel developments have been made. However, many difficulties remain to be solved before the

visitor to Alaska will be met with quality accommodations and services commensurate with the long-run opportunities which the Territory seems to offer for tourist expansion. The long winter season, the primitiveness of the country, the cost of living, the relatively few top quality locations for development along existing roads, material costs, the difficulties of obtaining quick deliveries of goods, and the uncertainties of any private undertaking in Alaska from the standpoint of the individual laboring under unsettled national and international defense conditions, are a few of the hazards faced by those who are attempting to make the country more useful to the traveling public.

In Alaska, as in so many parts of North America, the development of roads and the universal acceptance of the automobile as a household and business necessity signify the evolution of a tourist-recreation industry, closely integrated with other advancement in the use of the Territory's resources. The automobile and the airplane are a unique combination in Alaska. One complements the other; both are necessities. Little foreseeable conflict exists between them insofar as recreation is concerned, since a large number of the important recreation and other resources which may never be reached by road are developing through use of aircraft alone, or through necessary combinations of air, automobile, and boat transportation. Examples are: Katmai National Monument on the Alaska Peninsula, the Pribilof Islands of the Bering Sea, Kotzebue on the Arctic Coast, the Lake regions of the Kenai peninsula, Esther Island, Cordova, the College Glaciers of Prince William Sound, Glacier Bay National Monument, Taku Arm, Skagway, and other points in Southeastern Alaska.

The Alaska Railroad, authorized in 1914 as a means of developing the Territory, has improved its roadbed, equipment, and service to the point that it maintains a commanding position, together with ocean shipping—and despite swiftly growing trucking services—in both military and civilian freighting. The newest trains, streamlined and colorful, are attractive to the thousands of visitors who travel the rail belt from Seward to Anchorage, Palmer, Curry, McKinley Park, Fairbanks, and other points along the 470-mile route, from which they work out into the more remote regions.

For the traveler making Alaska his objective, numerous established communities, mileage of good to excellent roads, reasonably adequate transportation facilities, and other accommodations make possible a surprisingly wide selection of trips.

One may journey by automobile, rail, boat, or air through Southwest Canada and into Southeastern Alaska in only a few days, or for several weeks, depending upon his time, interest, and funds.

Similarly, he may proceed direct to Nome or Fairbanks, thence into the Arctic for observations in the immense expanse of Yukon River plains, the Brooks and Endicott Mountains, and the ice of the Arctic

Sea. A world in itself, occupying almost a third of the Territory, the Arctic appeals especially to those who enjoy the calmness and tranquillity of remote wild lands. The Natives are gentle, kindly, exemplary in the finest meaning of Christian friendliness. It is a land wherein one may be fortunate enough to see whales, polar bear, caribou, reindeer, mountain sheep, goats, moose, and wolves. He may fish for Arctic trout, and will find many forms of bird and insect life and a wide variety of plant life. During the long summer days the temperatures are favorable. Vegetables grow fabulously as all life expands. While the Arctic is a realm of immense distances, largely devoid of human life, it is not barren. In time, as accommodations improve and the public learns to understand its beauty, it may become attractive to many thousands of visitors annually.

The foregoing description of Arctic attractions can be paralleled in each portion of Alaska. Much or little time may be spent in any part. The Territory is so large and so diversified that the visitor's program can be extensive or budgeted to American Plan or "package" costs if necessary. Only a few years ago a vacation trip to Alaska was a major undertaking, generally limited to those with large means. Today, although still not inexpensive, Alaska travel has been brought within the means of many.

Alaska may be described by regions comprising more or less distinct landscapes. Most students divide the country into twelve such regions. They are discussed here, principally to keynote their esthetic and recreation resources for the benefit of the potential visitor.

Region 1.—Southeastern Alaska. In this region, traversed by The Inside Passage, are the Coast Range and the Alexander Archipelago from Skagway, Haines, Glacier Bay National Monument, and Cape Spencer on the north to Ketchikan, Prince of Wales Island, and Dixon Entrance on the south. In it lies the capital city, Juneau. Not far distant, by good road, is Mendanhall Glacier, a splendid attraction for Juneau visitors. Sitka, center of the significant story of Russian exploration and occupation along the Bering and Pacific Coasts and now one of the important fishing and lumbering locations of Alaska, is another prominent and fascinating city with one of the most beautiful harbors yet discovered. Sitka National Monument, of historical interest relating to Russian and Indian activities in Alaska, is found here.

This region, nearest to the United States of any portion of Alaska, is reached directly from it only by air and steamship. Motorists following the Alaska Highway and Haines Cutoff can enter the region at Haines. From there they can barge their vehicles to Juneau, and ship them from Juneau to other seaports in the Territory. The White Pass and Yukon Railroad can take automobiles from Whitehorse on the Alaska Highway to the seaport at Skagway. Thence they may be

shipped to other ports in Southeastern Alaska, or to Prince Rupert connected by highway to the United States.

The largest forest growth of the Territory is in Southeastern Alaska. The U. S. Forest Service administers this resource through the Tongass National Forest. Some of the forest areas offer excellent recreation attractions.

Admiralty Island is reached from Juneau by plane or boat. Here trout fishing is notable at proper seasons. An observatory, to give visitors an opportunity to see the Alaska Brown Bear from a safe vantage, is on this island.

The Stikine River boat trip to Telegraph Creek, British Columbia; the scenery and fishing offered by boat trips from Wrangell, Petersburg, and Ketchikan into the Behm Canal section; Bell Island Hot Springs; and the Indian villages with their unusually fine architecture, their interesting totem poles, and the weaving and carving of household and ceremonial articles by the Indian people are all pronounced scenic, cultural, and recreational value. Old Kasaan Historical area, near Ketchikan, contains the ruins of an ancient Haida Village. The spectacular Tracy Arm fiord about fifty miles south of Juneau can be navigated by small ocean-going craft.

Glacier Bay National Monument, foremost exhibit of tidewater glaciers and a sanctuary for wild game, is discussed elsewhere in this book.

Region 2.—The St. Elias Mountains. Following the coast of Alaska from Glacier Bay on the east generally to the Wrangell Mountains on the west, this great range is another distinct region. Mt. St. Elias dominates it with an elevation of 18,008 feet above sea level, reached in a steady ascent of only 20 miles from the head of Icy Bay in the Gulf of Alaska. To the observer, it appears to be a sheer rise from the sea. Scene of numerous glaciers and vast ice fields, the range is practically uninhabited except for a small scattering of fishermen, trappers, and airport and weather attendants living on the few flat and comparatively dry locations along the coast. One of the most formidable and impressive mountain ranges of North America, the St. Elias is close to the route of steamers plying between southeastern and south central ports and almost directly on the route of aircraft serving Juneau, Anchorage, Cordova, and Valdez.

Region 3.—The Chugach-Kenai Mountains. Lying west of the St. Elias Range and rising at the head of Prince William Sound, the Chugach Range is a rugged jumble of high peaks, glaciers, and narrow canyons interspersed with some extensive forested lowlands and slopes. The Chugach National Forest covers most of the southern slope, where the best forest growth occurs. Valdez, the historic seaport at

the head of Prince William Sound where the Richardson Highway begins its course to Fairbanks, is the transportation center for this region.

Worthington Glacier, on the north side of Thompson Pass as one drives inland from Valdez, is a striking exhibit. From the height of land startling views of the surrounding mountains are offered. Keystone Canyon, through which the highway passes not far from Valdez, is another point of spectacular scenic interest. It is sheer and narrow with several large waterfalls in the narrowest portion.

There is good salt and fresh-water sport fishing in the waters of Prince William Sound and in some of the island and mainland fresh water lakes and streams. In Prince William Sound, tidewater glaciers and deep fiords are characteristic features. Yale, Harvard, and Columbia Glaciers, and College Fiord are best known. Trips by air to some of the most enthralling scenes can be arranged from Valdez, Cordova, and Anchorage. On the inland side of the Chugach Range the Matanuska, Knik, Nelchina, and Taslina Glaciers are visible from the Glenn Highway between Palmer and Glennallen. Lake George, a natural seasonal impoundment caused by an ice dam which goes out in summer, is a spectacular sight too inaccessible at present to be observed except by air.

Adjoining the Chugach country on the south, the Kenai Peninsula and Kodiak Island units of this portion are geologically related, although separated by the waters of Cook Inlet. To the sportsman, the Kenai and Kodiak areas are notable as the home of some of the finest trophy specimens of moose and bear found in Alaska.

Excellent sport fishing, both salt and fresh water, is to be found in the Kenai area. With the completion of a highway connection from Anchorage, the Kenai Peninsula takes on a far greater importance to the vacationist than it had before. Several excellent resorts operate in the Kenai Lake recreation area. Boats and horses are available for hire. Numerous improved forest campgrounds are maintained by the United States Forest Service. A gun factory along the Kenai River Highway specializes in the manufacture of magnum and large bore rifles suitable for hunting the big game of the region. The Highway runs through the Kenai National Moose Range where numbers of moose can usually be seen by motorists.

Agriculture is steadily growing in importance in the Kenai country. Raising beef cattle has been a permanent institution on Kodiak Island for some years. However, the largest gross income at Kodiak, except that from commercial fishing, is reported to be from hunting parties.

Kodiak offers an impressive background of Russian history, as it was a Russian center prior to the establishment of Sitka as the Alaska capital. During the eruption of Novarupta in 1912, the people of Kodiak experienced one of the most dramatic and desperate periods

of human trial before the elemental forces of nature that has been recorded.

The principal cities in the Kenai area—Seward, Whittier, Kenai, Ninilchik, and Homer—are served by air, rail, road, or boat. The Alaska Railroad begins its winding course to the interior from the Seward steamship docks. Their relatively mild climate, magnificent scenery, good hunting and fishing, and agricultural development give the Kenai and Kodiak areas varied interest to the visitor.

Region 4.—Wrangell Mountains. Lying between the St. Elias Mountains and the Alaska Range, the Wrangell Mountains present a startling Alaska introduction to those journeying the Alaska, Tok, and Richardson Highways, or flying the air routes between Whitehorse, Anchorage, and Fairbanks. They emerge alone and apart from the other surrounding mountain ranges, being encircled and drained by the Copper, Chitina, White, and Nabesna Rivers. A mass of symmetrical volcanic peaks, these mountains constitute another group, with the Alaska and St. Elias Ranges, of the highest mountains of North America. Mt. Wrangell itself, the only member of the group evidencing volcanic activity at present, frequently displays a plume of steam at its crest, and smudges of ash down the otherwise crystal clean slopes of snow and ice.

While the Wrangells can be seen from many points along the highways, several of the best views are obtained from the Glenn and Tok Highways, the vicinity of Cobb Lakes, Slana, and Chitina at the end of the Edgerton Road. Trips by air into the upper Chitina River country, with visits to McCarthy and Kennecott, Chisana and other old mining camps.

Region 5.—Talkeetna Mountains and Copper River Plateau. This area is between the Alaska and Chugach Ranges. On the south, it is bounded by the Glenn Highway which connects Anchorage, at the head of Cook Inlet, with the Richardson Highway at Glennallen. On the east, it is bounded by the Richardson Highway, on the north by the route of the Denali Highway, and on the west by The Alaska Railroad and Susitna River.

Hunting, sport fishing, camping, and picnicking are the principal recreation pursuits. Some of the finest views of Mount McKinley are obtained from various points in this area. Being relatively close to Anchorage, Fairbanks, Palmer and the farming country, and accessible by road, rail, or air, this region takes an increasingly prominent place in probable future recreation development of the interior.

The new road to Mount McKinley National Park from the Richardson Highway at Paxson, known as the Denali Highway, will for the first time provide a route by which travelers can drive their own ve-

hicles to and into the park. There are several particularly useful vacation-recreation locations along the route that will be made accessible by this highway. The route was opened to travel in 1957.

Region 6.—Copper River Valley and Adjacent Lowlands. Though important to the student of geology and geography as a separate division or landscape, to the recreationist, it merely hinges the Wrangell, Talkeetna, Copper River plateau and Chugach regions. Sections of the Richardson and Tok Highways follow the Copper River.

Principal recreation activities are hunting, fishing, and motoring. Some of Alaska's most interesting roadhouses are in this region. The local population still is small and scattered. However, it has grown many fold with the advancement of highway and airway systems that penetrate this country while serving the other great surrounding regions.

Historically, the region is interesting to the student since it is the scene of early day transportation routes to points on the Yukon and Tanana Rivers from the port of Valdez. Among the few Indians of the interior are the Copper River people.

Scenically, the entire region belongs to adjoining landscapes. Covered with forest growth, it presents many splendid vistas across the Copper River bars and plains toward the Wrangells. A number of particularly good picnic and camping areas could be developed in this region—facilities greatly needed today by both visitors and the people of Alaska.

Region 7.—Susitna-Matanuska-Cook Inlet Lowlands. This portion of the Territory is dominated by agricultural and mining interests, military activities, and the industrial centers of Anchorage and Palmer. Here, as in the Kenai Peninsula region, there are stands of forest growth—not a common condition in interior Alaska.

Recreation resources are surprisingly varied. Hunting, fresh and salt water fishing, boating, bathing, motoring, and picnicking are the out-of-door summer activities. Winter activities include skiing, skating, the annual fur rendezvous at Anchorage and the annual dog races at Fairbanks. There are winter tours by rail and air between the cities and towns and other points of interest, for winter sports meets and other affairs, largely recreational. The winter tour possibilities in Alaska are slowly being revealed both to Alaskans and to their potential visitors from the outside.

This region, the location of Anchorage, largest city in the Territory, and of Palmer and the Matanuska Valley where agricultural life now centers, always holds a special attraction for the outsider. He finds it a little difficult to reconcile with preconceived notions of remote and

primitive Alaska the modern society, relative comfort, and the dynamic program for the future which are impressed upon him immediately upon his arrival.

Region 8.—The Alaska Range. This major Alaska edifice sweeps in a gigantic arc from the Mentasta Pass country north of the Wrangell Mountains, near the Alaska-Yukon boundary, far to the west and south, eventually to and adjacent to the Aleutian Range and the Alaska Peninsula. North of this tremendous range of mountains, in the form of a still greater arc across the Territory, lies the Yukon River Basin (see 9 Central Plateau Region). The Alaska Range is the "backbone of the Territory," and the principal feeder from the south into Yukon drainage via the systems of the Tanana and several other major rivers. The vast Kuskokwim drainage into the Bering Sea, through the common Yukon-Kuskokwim delta area, also rises in the southwest portion of the Alaska Range.

The Alaska Range is significant of mountain scenery on a scale of grandeur unsurpassed in the known world. It is in this region that the visitor feels the almost overwhelming majesty of Alaska's size and scale, and wonders if there is an end to her scenic greatness. These impressions and revelations center in Mount McKinley, highest point above sea level in North America. One of the most symmetrical and idealistic of mountains, McKinley rises 20,300 feet from surroundings dwarfed by comparison. The national park in which it lies is discussed in detail elsewhere in this publication.

Moose, bear, caribou, mountain sheep, wolves, wolverines, lynx, and a host of other mammals are found not only in the park but throughout the Alaska Range. Sport fishing is excellent in many of the lakes and streams.

Prospecting and mining for a variety of minerals and metals, prominently gold and coal, are a part of the scene in many sections of the Alaska Range. The Healy coal mines, near the Alaska Railroad on the north slope of the range not far from Fairbanks, are highly important to the local economy. Most of the diggings are of interest to the visitor.

Region 9.—The Central Plateau. The Central Plateau Region is the vast middle belt in the heart of the country. It arcs across the entire Territory from Canada to the Bering Sea and Bristol Bay.

This immense region, which should properly be known as the Yukon River Basin, is drained by the Yukon River and its numerous tributaries. It is the largest single physiographic unit of Alaska, including most of the Bering seacoast and Seward Peninsula.

In this great middle zone, which in distance is equivalent to that from Chicago to New York, there are but two cities—Fairbanks and

Nome. There are numerous villages, however, each one depending for existence upon fishing, trapping, prospecting and mining, radio, air and boat services, and wild game. Names such as Eagle, Chicken, Woodchopper, Circle City, Fort Yukon, Beaver, Galena, St. Michaels, Unalakleet, McGrath, Tanana, Ruby, Ophir, Bettles, Holy Cross, Bethel, and many others are common to Alaskans. Each is significant of gold discoveries, large or small, or the mining of other metals or minerals, or furs, or ivory carvings, basketry, and other arts and crafts of the Eskimos, or big game hunting, sports fishing, or vacation touring.

This region is unusually interesting and impressive to visitors because of the character and quality of the frontier. Insofar as land use and settlement are concerned, it still is a section of exploration and experimental effort. Winter temperatures north of the Alaska Range are consistently lower than those of the Arctic. While Anchorage may be having a few days of zero weather, the thermometer at Fort Yukon may reach 50 or 60 or more degrees below zero and stay there for some time. Break-up of ice in the spring usually comes in May, followed by long days of sunlight and phenomenal growth of vegetables, flowers, and other plant life.

Impressions of the Yukon Basin in the mind of the visitor are likely to be a jumble of scattered mental pictures—villages along river banks, with houses of moss-chinked logs; vast caribou herds crossing the road to Circle; surprising and unsung efforts of religious groups with their hospitals and churches for the Natives; an endless assortment of dogs wherever a person goes; the friendly way of life among the people, and their calm acceptance of the frontier as their proper environment; the fascinating and everlasting convolutions of the Yukon River looping its way to the sea; thousands of lakes in the river's bordering lands; the dark shape of a moose or a grizzly in the open and the blending of the same animal with its surroundings in concealment; wild crashing of surf at Nome and Kotzebue whipped by fierce wind almost abruptly out of a placid sea; Nome's crazily tilted buildings that sit on permafrost and have to be re-leveled whenever a thaw occurs; myriads of water birds of Hooper Bay; the dust of Fairbanks streets, airport used as a beacon by homing fliers; the smoke of unchecked fires burning throughout the summer wherever a thread of dry land is the muskeg permits inflammable growth; constant awareness of being far indeed from civilization—such are a few of the impressions that seem to identify this part of Alaska to her visitors.

Fairbanks, principal trading and traffic center of the interior, is reached the year around by air, rail, and highway, and, all of the northland is reached from it. Whether a person wishes to see the mining industry in the dredging areas near Fairbanks or on the way to Livengood or Circle City, or to visit scenes of some of the country's oldest

diggings in the Chicken-Eagle area; or to visit Nome or the Arctic, he can always start from Fairbanks.

The most modern, and probably the richest, placer mining operations in the world may be visited not far from Fairbanks. The great steel dredges are an awesome spectacle as they feed relentlessly upon the rich gold-bearing ground. In the same areas may be seen also the use of giant streams of water played under heavy pressure against the banks of clay and gravel, to cut and wash them down for easier dredging. The mining story is repeated in one form or another from Chicken on the Canadian border to Nome on the Bering Sea; and at Nome the beach placers, even for Alaska, are a unique variation in the story of Alaska gold.

Eskimo people of the Bering and Arctic districts of this region, with their ivory carving, basketry, artistry with furs, skin boats, seal and whale hunts, native dances, and stories of hunting and trapping expeditions, can be visited by airplane at almost any village. Some of the island-villages can be visited when weather is suitable and if flying and boat equipment are available.

Fortunate indeed is the person who has the opportunity of exploring this region of Alaska by automobile, boat, and plane. Even a quick visit, however, perhaps to Fairbanks, Circle City and Circle Hot Springs, and to Nome, Kotzebue, and Bethel, is richly rewarding, provided one enjoys and can understand a view of America's greatest and only remaining frontier.

Region 10.—Alaska Peninsula and Aleutian Islands. Developments in airfields and other facilities made during World War II have enabled the aviation industry in Alaska to bring the Aleutian Islands within limited reach of tourists. Demonstration has not progressed to the point of special significance beyond a new conception of the Aleutians as a realistic portion of Alaska, with some known agricultural and recreation possibilities.

Foremost visitor interest probably centers in the chain of volcanoes which apparently account for the existence of this region. Mt. Redoubt, just across Cook Inlet from Anchorage, is the easternmost member of the series, and Redoubt will be seen smoking slightly by anyone flying from Anchorage to Naknek on a clear enough day. Mt. Iliamna, Mt. Katmai, Aniakchak, Veniaminof, Pavlof, Shisaldin, Korovin, Tanaga, and a number of others, active and inactive, are found in this thousand mile long archipelago. The best known volcano of them all is Mt. Katmai in Katmai National Monument which is described elsewhere.

One of the most interesting areas of this region is the Pribilof Islands, where the Government's fur seal herd is found each summer. As an educational institution, and a travel experience, the Pribilofs

are unlike anything else in the world. The life of the seals is observed at close range, and the taking and preparing of the skins for shipment to the United States for further processing and final marketing in coats and other garments, is all observed by the visitor. The Aleut people, who live on the Pribilofs, are racially distinct from the Eskimos. As is true of the Eskimos, they are a remarkable group, unusually intelligent, talented, and friendly. The work with the seal herds is in their hands.

Scenically, the Aleutians are in a class by themselves. A vast march of towering volcanic peaks across the sea, they seldom are fully visible since the fogs and storms of that part of the Pacific are almost eternal. However, when the traveler is present during a period of clear weather he can say at last that he has glimpsed the ultimate in superlative sea and landscape views.

Archeologically the Aleutians and the Alaska Peninsula long have been known for their yields of artifacts which reveal some of the story of ancient man—his migrations and evolutionary history. This field of study is pursued each year with searching attention in the field by numerous students from schools and colleges and other institutions. Historically, the adventures of the Russian fur hunters and colonizers, their ravaging of the Aleuts, and the tales of insuperable hardships suffered by the early Russian mariner-furhunters, make interesting reading today for the Alaska visitor.

While this region of Alaska still is not well known to the public, and may not be for many years to come, the sum total of specialized knowledge is comprehensive today. It seems likely that the Territory and the rest of the country will hear more of the region, recreationally and industrially, as Alaska's population and economy expand.

Region 11.—The Brooks Range. Separating the Yukon River Basin from the Arctic Slope, the Brooks Range is another backbone of mountainous terrain which, together with a number of satellite ranges, extends across the country at about 68th degree of latitude. The entire range is inside the Arctic Circle, although of course the southward drainage into the Yukon (Region 9) through such streams as the Porcupine, Chandalar, and Koyukuk slopes down from the Brooks Range across the Circle. On the north and west this region forms the Arctic Ocean coast save for Region 12, which is separated by the Utukok, Carbon, and Colville Rivers and is considered a distinct landscape.

Recreationally the resources of this region, together with those of the Arctic Slope still farther north, are untapped and unknown except by a few specialists who have business, scientific, or defense interests in the region and of necessity have learned something of the country. Occasional scientific groups bent upon archeological, mineral, topo-

176°
176°
168°
160°
ARCTIC
Barrow
Wainwright
CHUKCHI SEA
Point Lay
Kokolik R
Utukok R
Meade River
Ikpikpuk River
Teshekpuk Lake
Colville River
66°
Point Hope
Kukpuk R
SHUKOTSKIY POLUOSTROV
BROOKS
Kivalina
Noatak River
Noatak
BAIRD MOUNTAINS
KOTZEBUE SOUND
Kotzebue
Kobuk River
Shungnak
Alatna R
ANADYRSKIY ZALIV
Shishmaref
Selawik R
ARCTIC
Hog River
Candle
Wales
SEWARD PENINSULA
U.S.S.R.
UNITED STATES
Kuzitrin R
Koyukuk
Midasiina River
RIVER Tan
ST. LAWRENCE ISLAND
Nome
Golovin
Norton Bay
Koyukuk
62°
NORTON SOUND
Ruby
YUKON
St Michael
Dishkakat
MTS
Fork
Andreafsky R
Innoko River
North
McGrath
KUSKOKWIM
ALASKA RANGE
Holy Cross
Hooper Bay
ST. MATTHEW I
BERING SEA
Kuskokwim River
Aniak
Aniak R
Stony R
Holitna R
NUNIVAK I
Bethel
58°
Nondalton
KUSKOKWIM BAY
Iliamna Lake
Platinum
Dillingham
Nushagak River
PRIBILOF ISLANDS
KATMAI NAT'L MON
STRAIT
BRISTOL BAY
SHELIKOF
Kodi
KODIAK ISLAND
ALASKA PENINSULA
54°
ISLANDS
UNIMAK I
ALEUTIAN
UNALASKA I
Fort Glenn
Unalaska
UMNAK I
FOX ISLANDS
172°
Attu Isla
Agat
52°
172°
168°
160°
152°

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graphic, or wildlife research and discovery are organized to penetrate this domain. Each year a few hunting parties go into the country principally for mountain sheep, although caribou and grizzly bears also are present.

On the Arctic Seacoast one point of visitor contact has been well established through private air service progress. This is Kotzebue, an Eskimo Village where air service is maintained all year with daily service during the summer. Point Hope, a remote and primitive Eskimo village north of Kotzebue, also is serviced weekly by a commercial airline which will take passengers to view the village during the short stop made before the flight returns to Kotzebue.

Some public attention through advertising is drawn to the possibilities for trout fishing in some of the streams and lakes of this region. Angling for Arctic trout is an experience few sportsmen as yet can claim. How abundant the game fish resources may be in the region is not known, but there are many good lakes and streams capable of supporting fish life, and apparently the winter temperatures in this region compare with those of the Yukon River Basin farther south, where game fish are known to do well.

The thought of traveling across the Arctic Circle and into the Arctic regions itself is intriguing to most visitors in the interior.

Region 12.—Arctic Plains and Foothills. This region is small compared to several of those discussed in the narrative immediately preceding. However it is a distinct landscape, separated from the Brooks Range largely by the Colville River.

Eskimo people are found at numerous villages throughout the Arctic Coast. Best known is the village of Barrow, northernmost settlement on territory of the United States, and the communications and transportation center of the region. The Federal Government maintains various establishments at Barrow for weather observations, minerals and explorations, surveys of various types, defense activities, and assistance to the Eskimo people. Military and special charter or contract flying is constant between Barrow and Fairbanks, with occasional service to Wainwright and other coastal villages or camps.

Many Alaska visitors are interested in reaching the northernmost point of the country, and visit Barrow where transportation facilities and other accommodations are available.

While the twelve regions described in the foregoing provide an organized approach to explanation and understanding of the country, they necessarily are introductory only. Anyone desiring more complete details in any of the fields of scenery, wildlife, minerals, metals and mining, geography and geology, forestry, hydroelectric power, agriculture, trapping, education, business opportunities, or any of the

many other affairs of Alaska, can write to the Alaska Resource Development Board or the Alaska Visitors Association, both at Juneau, Alaska, where a small staff of experts devote their entire effort to informing the public.

Each city of appreciable size has a chamber of commerce organization; the University of Alaska supplies some kinds of information, being able to answer most technical questions related to mining, or the history and the educational and social life.

The Arctic Institute of North America, and the U. S. Geological Survey, also in Washington, are sources of general and technical information regarding geology, geography, archeology and history, maps and mapping, and the physiographic character of the Territory.

There are numerous other bodies qualified to answer inquiries with accurate facts. However, the quickest course in gaining information is to address first the Alaska Resource Development Board whose duty it is to place inquiries where they can be met most effectively.

Alaska's National Park and National Monuments

The National Park Service of the Department of the Interior administers one national park and three national monuments in Alaska. The park and two of the monuments are primarily of scenic and scientific importance; the other monument is concerned chiefly with history and ethnology.

Extraordinary scenic qualities are, as a rule, the basis for establishment of national parks; only Congress can establish them. Outstanding historic, prehistoric or scientific values are usually the reasons for establishing national monuments, thus giving the special protection to those values implied by that designation; they may be established by Act of Congress; or the President may establish them by proclamation under authority of the Antiquities Act of 1906. The basic principle of management applied to them is that of conserving the scenic, historic, and wildlife resources unmodified and unimpaired, for public enjoyment.

Mount McKinley National Park

Lying in the central portion of the Alaska Range and mostly on its north slope, Mount McKinley National Park (1,939,493 acres) was established in 1917 for two principal purposes—to include the highest mountain on the North American continent and its associated peaks, and to provide protection to the extraordinary wildlife native to the region.

Mount McKinley, the central and crowning scenic feature of the park is twin-peaked. Its south peak rises to an altitude of 20,269 feet; the north peak to 19,000 feet. Nearby in the park, Mount Foraker reaches 17,000 feet; Brooks Mountain, 11,560; Mount Mather, 11,540; and, at the southwest corner of the park, Mount Russell, 11,500 feet. Perpetually snow covered on those slopes gentle enough to hold snow, Mount McKinley and its associated peaks are the starting points for an extraordinary series of glaciers. The Muldrow Glacier, which is fed from snowfields on Mount McKinley and several other peaks, is some 55 miles in length, all of which lies in the park.

Mount McKinley is visible from many places on the broad lowlands of the Tanana and Kuskokwim Rivers and from the Alaska Coast at the head of Cook Inlet.

The National park is one of the great wildlife sanctuaries of the world and a paradise for the wildlife photographer, who can find in it 34 varieties of mammals and 112 varieties of birds. The white Dall sheep, a bighorn, found only in Alaska, is one of the most distinctive of the mammals. In summer, bands of them may be seen at the Savage River headwaters and above the pass at double mountain. Caribou in large herds, grizzly bears, moose, and many varieties of fur-bearers are commonly seen.

The McKinley Park Hotel, located at the entrance of the park at McKinley Park Station, is operated under concession, and is open from June 10 to September 15. From the entrance a road extends for 89 miles across the park. At Camp Eielson (Mile 66) and at Wonder Lake, beyond, there are splendid views of Mount McKinley. Close to the hotel are interesting hiking trails and excellent fishing for Dolly Varden trout and grayling. Mount McKinley is not visible from the hotel.

Glacier Bay National Monument

Glacier Bay National Monument, containing 2,274,595 acres, lies about 100 miles northwest of Juneau, and extends from Cross Sound, on the south, to the Canadian boundary on the north. Mount Fairweather, on the international boundary line, with an altitude of 15,320 feet, is the highest in the monument, though there are numerous other peaks more than 12,000 feet in height.

The principal features of the monument are the vast ice fields and glaciers and the long fjordlike bays which have been sculptured by the moving ice, and into which the waters of the ocean have moved as the ice has receded through melting. The rate of recession is rapid; 250 years ago all of Glacier Bay, which with its northern inlets extends from the southeast to the northwest clear across the monument, was filled with ice 3,000 feet thick.

THE BEND OF REID INLET—MOUNT FAIRWEATHER IN THE DISTANCE. GLACIER BAY NATIONAL MONUMENT, ALASKA.

EXPLORING ONE OF THE BEAUTIFUL CRAGS ON THE EASTERN MARGIN OF BRADY GLACIER. GLACIER BAY NATIONAL MONUMENT, ALASKA.

In the monument may be seen every stage in the growth of the northern forest, from a tentative foothold on the glacier moraines to luxuriant primeval forest. There are many large mammals such as the Alaska brown bear, grizzlies, black bear, and Sitka blacktail deer, as well as wolverine, marten, red fox, mink, mountain goats and, in the waters of the bay, hair seals, porpoises and whales. Waterfowl are abundant.

The monument is still undeveloped, but is visited each season by several hundred persons, who reach it by airplane, chartered boat, or excursion steamer. For detailed information about the monument, write to the Superintendent, Sitka National Monument, Sitka, Alaska.

Katmai National Monument

Katmai National Monument embraces a vast mountain and lake wilderness, containing probably as great a diversity of scenery, wildlife and scientific interest as any area of the National Park System. Situated near the base of the Alaska Peninsula, it contains 2,697,590 acres. It was established in 1918 by President Woodrow Wilson.

Here Novarupta erupted in June 1912. This was one of the great volcanic eruptions of which there is record. For three days after the explosion which started it, the darkness of night covered a vast territory around the mountain; over many thousands of square miles, volcanic ash to a depth of a foot or more was deposited. The crater is three miles in diameter. Volcanic dust was deposited in perceptible quantities more than 350 miles away; the effects of the sulphurous gases emitted were noted as much as 1,500 miles away. The volcano is now inactive, but others near it are not.

One of the outstanding features of the monument is the "Valley of Ten Thousand Smokes," where formerly there were thousands of steam jets, large and small. The valley was first noted when Dr. Robert F. Griggs, leading an expedition sponsored by the National Geographic Society, following the 1912 eruption, discovered and wrote about it. Very few of the fumaroles are active today.

The monument is noted for its excellent fishing and for the abundance of wildlife, including the Peninsula brown bear, largest of carnivorous animals. The National Park Service stations a ranger in the monument each summer, and Northern Consolidated Air Lines provides air service to it. That company also operates two fishing camps there during the summer season.

Sitka National Monument

This 54-acre national monument, close to the city of Sitka, includes the site of an ancient village of the warlike Kon-Siti Indians, who were

A NATIVE CARVER'S WORK ON 55-FOOT TOTEM POLE.
(PHOTO—UNITED STATE FOREST SERVICE.)

defeated by the Russians in the Battle of Alaska in 1804, when the latter established supremacy over the Indian tribes of southeastern Alaska. The monument contains a replica of a Russian blockhouse. Its principal attraction is its collection of totem poles, one of the largest and finest to be found anywhere. A resident superintendent represents the National Park Service at the monument.

Totem Poles

Contrary to popular belief, the totem pole is not an idol, has no religious significance, and is based on the tribal past. Totem poles are deeply carved cedar trees, some 40-feet high, covered with figures of animals, birds, whales, fish, and other forms of wildlife, the family emblem, and figures immortalizing any historical event to heroes in the family life. They are colored with natural vegetable and mineral paints prepared according to age-old methods and are a work of art.

The largest and most interesting group of totem poles standing in Alaska has been gathered in Totem Pole Park at Saxman, two miles south of Ketchikan. The original locations of these renovated poles were on canoe harbors seldom visited by tourists. Six principal types of poles were renovated: house pillar and false house pillar, mortuary, memorial, heraldic, potlatch, and ridicule.

Five major northwest linguistic groups carved totem poles or allied monuments similar to totem poles. The carvers were the Tlingits, Haidas, and Tsimshians of Alaska, and the Kwakiutis and a branch of the Salish tribe residing in British Columbia on the Bella Coola River, often referred to as the "Bella Coolas." In addition, on the west coast of Vancouver Island were the Nootkas and across the Strait of Juan de Fuca at Cape Flattery were the Makahs, who did not carve tall totem poles but erected carved grave figures and house posts.

These totem poles were abandoned by the natives when larger towns offered more employment in the white man's salteries and canneries. The poles were gathered and refurbished, or copied, in 1938 by the United States Forest Service and Indian artisans.

Scientific Study of the Arctic

WITH THE RAPID ACCELERATION of northern development in the past few years, there has arisen an unprecedented need for expansion of scientific study in the North American Arctic and Subarctic. Basic knowledge in many fields is required to meet the questions associated with introducing a complex mode of life in a pioneer environment—the construction of roads, airfields and industrial plants on perennially frozen ground, for example, the deterioration of equipment, maintenance of public health, sanitation, water supply, navigation, northern agriculture and many others. In addition are the questions related to the location, protection and intelligent development of the natural resources of the North—its vast reserves of timber and minerals, its land and aquatic life, its hydroelectric potential.

But beyond these so-called "practical problems" are the even more challenging riddles of the North which, when solved, can materially affect the health and welfare of the peoples of temperate zones. The remaining ice-sheets and glaciers of the North preserve the climatic records of our continent and can shed light on cycles still to come. Much of our weather is "made" in the Arctic, where meteorological research can expedite long-range forecasting with its many economic implications. Study of the hardy animals and fish which have adapted to the rigors of the northern environment can further our understanding of basic physiological processes in man and their relation to some of the scourges of our time. The arctic seas hold answers to fundamental questions in biology and oceanography. Research on aurora, the ionosphere and cosmic rays are related to navigation and the propagation of radio waves. Indeed it can be said that the North is itself a vast natural laboratory, Nature's own cold room, where the possibilities regarding research are virtually unlimited.

To help meet the scientific challenge of the Northland, the Arctic Institute of North America was founded in 1945 by a group of U. S. and Canadian scientists. It was established on the premise that scientific problems are common to the entire region, and that economy of effort and wider discussion would be effected by treating the area as a whole. A non-profit organization, the Institute is incorporated in both Canada and the U. S. and maintains offices in Montreal, Ottawa, New York and Washington. Its Board of Governors is drawn from many fields of achievement in both countries, and Greenland is represented by a Danish member.

The chief function of the Arctic Institute is to sponsor research. By the close of 1956 it had sponsored more than 200 field research projects in every major area of science. Investigations range from small-scale studies often completed in a single season to large expeditions embracing research in several fields of science and continuing over a period of years.

To date more than half of the Institute's field research projects have been carried out in Alaska. Since 1954 the Institute has assisted the development of the scientific program at the Arctic Research Laboratory operated by the University of Alaska for the Office of Naval Research. This unique research station is the Northernmost laboratory on U. S. soil and investigations are continuously in progress in a variety of scientific disciplines.

In addition to the primary aim of gathering fundamental data in and about the North, the Institute's research program has performed a valuable educational function. The young men trained in the field under the guidance of seasoned investigators will help develop the corps of experienced northern specialists needed by science, industry and the armed forces.

Another educational task has been the preparation of such tools as the *Arctic Bibliography* for the use of all northern workers. By 1956 six volumes had been published by the Government Printing Office listing and summarizing over 5,000 publications in English, Russian, the Scandinavian and other languages. This monumental achievement, to which it is expected a volume will be added each year, was supported by funds from the departments of the Army, Navy and Air Force. A still further "tool" for northern science is the volume *Arctic Research* (1956), an analysis by 35 authorities of the present status of northern science and the most pressing problems within each field.

The Institute also publishes a *Technical Series* and a quarterly journal *Arctic,* which carries articles of both general and technical interest. The journal is distributed to all those who, by payment of a modest fee, have become members of the Institute, and thus participate in its effort to lay a sound foundation for the orderly development of a new frontier.

Transportation

ADEQUATE TRANSPORTATION to and within Alaska is recognized as one of the prime factors underlying the development of the Territory and the realization of its economic and other potentials. While much remains to be accomplished in this field, gratifying progress has been made in the last few years in improving all modes of transportation.

Automotive Travel

An Act of Congress in 1905 created the Alaska Road Commission as an agency of the War Department. The Commission commenced construction of a comprehensive road system consisting of a main road (the Richardson Highway) from the port of Valdez to Fairbanks in the interior, and of a large number of secondary roads connecting mining districts and other inhabited centers with each other, the Richardson Highway, or navigable water. These were supplemented by winter sled roads and trails leading to the more remote localities. Inadequate appropriations retarded the progress of the road program until World War II focussed national attention on Alaska and its needs.

In 1932 the Alaska Road Commission was transferred to the United States Department of the Interior, and in 1948 a Commissioner of Roads for Alaska was designated to be responsible for the expenditure of largely increased funds for road work. In 1956 the title "Commissioner of Roads for Alaska" was changed to "Director, Alaska Road Commission."

The road building and maintenance program remained a responsibility of the Department of the Interior until September 16, 1956, when the Alaska Road Commission was transferred to the Bureau of Public Roads, Department of Commerce, under Public Law 627, the

Federal-Aid Highway Act of 1956. Therefore, the Bureau of Public Roads is the agency responsible for highway construction and maintenance in Alaska, and operates with funds appropriated by the Congress. Funds also are provided by the Territorial Legislature for road construction. These Territorial funds are distributed by the Territorial Board of Road Commissioners and are used largely on cooperative projects with the Bureau of Public Roads. A part of the Territorial funds is expended in cooperation with mining companies and others properly equipped to handle construction work. The Territorial agency does not maintain a construction organization.

As of the close of the fiscal year ended June 30, 1956, the highway system in Alaska totaled approximately 4,000 miles, of which 2,000 miles are maintained open the year round, and 445 miles of trails.

The primary system, consisting of the Richardson, Alaska, Glenn, Seward-Anchorage, and Haines Highways, is 85 percent paved. The balance, except for a 73-mile section of the Alaska Highway scheduled for contract in the spring of 1957, is under contract for paving. In addition, approximately 25 miles of feeder roads in the vicinity of population centers have been paved and an additional 50 miles is under contract or scheduled for surface treatment in the near future.

The present highway system consists of a thousand-mile network of all-weather paved primary routes connecting the ice-free ports of Valdez, Seward, and Haines with interior Alaska's principal cities and military installations, and with the continental United States via the Alaska Highway through Canada; and a 2,594-mile secondary system connecting farming, mining, and industrial areas to the primary network. The most northerly point on the connected system at Circle is the northern terminus of the hemispheric highway presently being constructed through North, Central, and South America. In addition to the connected network, the system includes 570 miles of isolated roads connecting inhabited areas with air, rail, or water transportation facilities.

The thousand-mile primary system and much of the connected secondary system in the vicinity of the Territory's principal cities are paved; the balance of the network is gravel surfaced.

Designation and mileage of the principal highways follow:

Alaska Highway: northwestward from Alaska-Canadian border to Big Delta Junction where it joins the Richardson Highway. All weather travel—201 miles.

Richardson Highway: due north from Valdez on Prince William Sound to Fairbanks over Thompson and Isabel Passes to Fairbanks—365 miles.

Glenn Highway: northeastward from Anchorage to Glennallen Junction—189 miles.

Denali Highway: from Paxson on Richardson Highway to Mt. McKinley National Park—160 miles (an additional 89 miles extend through the Park to Kantishna).

Tok Highway: from Gulkana on the Richardson Highway to Tok on the Alaska Highway.

Steese Highway: northeastward from Fairbanks to Circle on the Yukon River. Open the year around from Fairbanks to Chatanika, Mile 31; open over entire length from mid-May through November—164 miles.

Sterling Highway: southwestward from the Forest Highway System on Kenai Peninsula to Kenai and Homer (includes 18 miles of Forest highways). All-weather travel—150 miles.

Seward-Anchorage Highway: connects Anchorage with the Kenai Peninsula road system and Seward. All-weather travel—131 miles.

Taylor Highway: north from Tetlin Junction, Mile 1301 on the Alaska Highway to Eagle, Alaska, and Dawson, Yukon Territory. June through November travel—161 miles.

Haines Highway: northwest from Haines in Southeastern Alaska, connecting with Interior Alaska and the continental United States via the Alaska Highway. The route is 154 miles long of which 41 miles are in Alaska. Alaska portion is paved.

ALASKA HIGHWAY

At one time Alaska's only connections with the United States were by water and air but during World War II, as a military necessity, the Alaska Highway was constructed under an agreement between the United States and Canada, at a cost of $113,824,220. Beginning at Dawson Creek, British Columbia, this highway stretches north through British Columbia and the Yukon Territory, crosses the Alaska-Canadian border, and joins the Richardson Highway at Big Delta Junction. The Richardson Highway continues on to Fairbanks.

Alaska Highway mileage:

	Miles
Dawson Creek to Alaska-Canadian border (Alaska Highway)	1,221
Alaska-Canadian border to Big Delta Junction (Alaska Highway)	202
Big Delta Junction to Fairbanks (Richardson Highway)	100
Total distance from Dawson Creek, British Columbia, to Fairbanks	1,523

The Alaska Highway was built through wilderness as a 26-foot gravelled all-weather road, with moderate grades and curves, and at present is the only road directly linking continental United States and Canada with Alaska. Construction on this highway south from Whitehorse, Yukon Territory, began in April 1942; north from Dawson Creek in

May, and south from Big Delta in June. When the preliminary road was completed, an opening ceremony was held at Soldier's Summit in Yukon Territory on November 20, 1942. After completion of the highway, control of the Canadian section was transferred to the Canadian Government in a ceremony at Whitehorse on April 1, 1946, and it is being maintained by the Canadian Army Northwest Highway System. The highway is kept open all year, but the preferred travel season is from June to October. Information on seasonal highway conditions may be obtained from the Canadian Government Travel Bureau, Ottawa, Canada.

Travel Over The Alaska Highway—General Information

Crossing the U. S.-Canadian border either way is usually made without difficulty or delay by permanent residents of the U. S. A. They do not require passports. To assist officers of both nations to speed the crossing, however, native-born U. S. citizens should carry identifying papers such as birth, baptismal or voter's certificate, driver's license, or special letters. Other residents from the United States will need either a Naturalization Certificate or an Alien Registration Receipt Card.

Motorists—Be sure to carry your car Registration Card.

CANADIAN CUSTOMS REQUIREMENTS (ALASKA HIGHWAY)

Every person entering Canada either from Alaska or from any part of the United States and intending to drive over the Alaska Highway should have in his possession at time of entry into Canada a sufficient sum of money for the trip, or should be able to prove to the satisfaction of frontier officers that he can obtain in Canada any additional funds required. The total mileage to be driven from point of entry to point of exit will provide some idea of the number of days the traveller will be in Canada. The types of vehicle, i. e. ordinary car, truck, trailer, etc. will indicate the quantity of gas and oil required for the trip. In the same way the number of people in the party multiplied by number of days and average daily cost for food and lodging will provide a good indication of total normal expenditure. A reasonable sum should also be included in the estimate for possible road emergencies as the trip is mostly over gravel-surfaced roads.

Motor cars in poor condition and older models, namely cars that are more than 10 years old, must be entered on a Commercial Vehicle Permit, with either cash or guarantee bond for export.

Similar action will be taken with respect to other travellers where the

amount of money and/or equipment carried appear to be inadequate for the journey.

Unless it is felt by the Customs officer at port of entry that the vehicle used for tractive purposes is not equal to the task, house trailers up to 15 feet long may be permitted entry when towed by any four-wheeled automotive vehicle. House trailers of 16 feet to 30 feet in length may be admitted when pulled by any standard American make of automobile not lighter than the Ford-Plymouth-Chevrolet class. Any trailer beyond 30 feet in length may be permitted entry only when towed by a vehicle of at least three-quarters, or higher, tonnage rating. All such motor vehicle-trailer combinations shall be covered by a Commercial Vehicle Permit with cash or guarantee bond as security for export. The Canadian Customs officer at the frontier port of arrival is the person best qualified to indicate whether the car can handle the trailer, and by physical examination arrive at the amount of cash deposit or bond to be taken out.

Agents for Government approved bonding companies are located in close proximity to principal ports of entry into Canada. Cost of such guarantee bonds is reasonable.

Household effects, tools of trade or any items of merchandise not ordinarily classifiable as normal baggage, carried in passenger vehicles driven by the owners or in small personally-owned trailers, may be entered on a Tourist Permit and released without security.

A report inwards into Canada from Alaska and outwards from Canada into Alaska is required to be made through Canadian Customs at Snag Creek, Little Gold Creek, Old Crow, Yukon Territory or Pleasant Camp, British Columbia.

Firearms—Fishing Tackle

A visitor does not require a Federal permit to possess rifles, shotguns or fishing tackle in Canada. He must provide Customs with a description of such equipment and serial numbers of guns so that the articles may be readily cleared upon their return.

Such permission does not give the right to hunt or fish. There are specific laws in all provinces which must be observed. Non-resident licenses are required for each province where the visitor plans to hunt or fish. When rifles and shotguns are carried in transit, the visitor should ensure that he is familiar with the laws of the provinces through which he is travelling.

In British Columbia, non-residents carrying rifles, shotguns or fishing tackle in transit must have such equipment sealed by game authorities immediately after entering the Province. In Alberta, rifles and shotguns carried in transit must remain stowed in the car at all times.

Fifty (50) rounds of ammunition per person are admitted duty free.

Note

Revolvers, pistols, or other prohibited weapons, the personal property of persons travelling by highway to and from Alaska through Canada, may be allowed entry without special firearm import permit, under the following regulations:

(1) Such firearms must be placed in a separate container and sealed by Canadian Customs.

(2) At the port of exit the seal will be removed by the Customs Officer. If there is indication that it has been tampered with, the firearm will be seized.

Baggage, Furniture and Equipment

Personal belongings, sporting equipment, radios, musical instruments, still and moving picture cameras and six rolls of films and 12 flash bulbs per person, typewriters for personal use, 50 cigars, 200 cigarettes, two pounds of tobacco, 40 ounces of alcoholic beverage, two days' food supply per person (excepting pork and pork products), and gasoline and oil for 300 miles motoring, may be brought into Canada free of duty or deposit.

ROAD CONDITIONS

Approach roads through the Provinces of Alberta and British Columbia as well as the Alaska Highway are being improved every year and most hazards of the journey have been eliminated. However, it is still a long and arduous journey.

Weather has a great influence on travelling conditions along the Alaska Highway. The following summary will give a general idea of seasonal conditions:

December—January—February

During these months snow-fall usually averages from 10 to 15 inches a month, and the highway is generally in good condition. Hard packed snow provides smooth driving. Below zero weather prevails at this time of the year. Precautions should be taken to have necessary clothing for protection against such weather. Automobiles should be completely winterized to withstand 60° F. below zero temperatures. Tire chains, tow-rope, shovel and means to produce fire should be brought along.

March—April—May

Melting snows create icy conditions during March. Throughout the months of April and May the highway is usually poor owing to spring

thaws. During this period highway maintenance authorities may find it necessary to restrict travel in certain sections. This may involve short delays until repair work can be completed by maintenance crews. In such cases warning signs are prominently displayed. The motorist is advised to drive with extra caution during these months and to carry tire chains, tow-rope, pick and shovel.

June—July—August—September

These months are the most favorable for motoring. The days are warm with cool evenings. The road is well graded, although a long dry spell tends to make it dusty. It is suggested that the motorist, travelling at this time, carry a good spare tire, insect repellent and a basic set of car tools. It is also advisable that the underpart of the gasoline tank be protected with a piece of rubber tire or inner tube against flying gravel.

October—November

During October and November rain, light snow, and frost cause slipperiness. Travellers should acquaint themselves with highway conditions. This information is usually posted at telephone repeater stations or highway maintenance camps en route. Chains, a container of sand, pick and shovel should be carried.

Table of mileages to and within Alaska

	Miles
Great Falls, Mont., to Edmonton, Alberta	500
Great Falls, Mont., to Fairbanks, Alaska	2, 500
Edmonton to Dawson Creek, British Columbia	475
Edmonton to Whitehorse, Yukon Territory	1, 393
Edmonton to Anchorage	2, 133
Edmonton to Fairbanks	2, 000
Dawson Creek, British Columbia, to Whitehorse	918
Dawson Creek to Haines Junction	1, 016
Dawson Creek to Haines	1, 170
Dawson Creek to Alaska Boundary	1, 221
Dawson Creek to Tok Junction	1, 318
Dawson Creek to Anchorage	1, 656
Dawson Creek to Big Delta (Junction)	1, 428
Dawson Creek to Fairbanks	1, 523

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Table of mileages to and within Alaska—Continued

	Miles
Haines to Haines Junction	154
Haines to Whitehorse	252
Haines to Fairbanks	661
Haines to Anchorage	794
Haines to Valdez	721
Haines to Tok Junction	456
Tok Junction to West Fork, 40 Mile River	63
Tok Junction to Big Delta	110
Tok Junction to Fairbanks	205
Tok Junction to Glennallen Junction	150
Tok Junction to Anchorage	338
Tok Junction to Valdez	266
Tok Junction to Circle	368
Tok Junction to Livengood	287
Big Delta to Fairbanks	95
Big Delta to Glennallen Junction	152
Glennallen Junction to Glennallen Depot	2
Glennallen Junction to Gakona Junction	14
Glennallen Junction to Chitina Junction	24
Glenallen Junction to Chitina	63
Glennallen Junction to Valdez	116
Glenallen Junction to Anchorage	189
Glenallen Junction to Fairbanks	250
Fairbanks to Circle	163
Fairbanks to Livengood	82
Fairbanks to Anchorage (via Paxson)	439
Fairbanks to Anchorage (via Tok)	543
Fairbanks to Valdez	366
Fairbanks to Haines	661
Fairbanks to Edmonton, Alberta	2, 000
Fairbanks to Great Falls, Mont.	2, 500
Anchorage to Palmer	48
Anchorage to Glennallen Junction	189
Anchorage to Valdez	305
Anchorage to Tok Junction	338
Anchorage to Fairbanks (via Paxson)	439
Anchorage to Fairbanks (via Tok)	543
Anchorage to Haines	794
Anchorage to Edmonton, Alberta	2, 133
Anchorage to Great Falls, Mont.	2, 633
Anchorage to Seward	127

Rail Transportation

THE ALASKA RAILROAD

An act of the United States Congress, approved August 24, 1912 (Public Law 334), provided for the appointment by the President of a railroad commission to conduct an examination into certain problems relating to transportation in Alaska. The members of the commission appointed by President Taft consisted of Maj. Jay J. Morrow, chairman; Alfred H. Brooks, geologist in charge, Division of Alaskan Mineral Resources, Geological Survey, vice chairman; civil engineer Leonard M. Cox, United States Navy; and Colin M. Ingersoll, consulting railroad engineer, of New York City. The commission went to Alaska and later submitted a comprehensive report which was transmitted by President Taft to Congress in February 1913.

A second act, approved in March 1914, authorized and directed the President to designate and cause to be located, routes for railroad lines in the Territory, to be located so as to connect one or more of the open harbors on the southern coast of Alaska with the navigable waters, coal fields, and agricultural lands of the interior.

Pursuant to the second act, a new commission was created by President Wilson, the Alaskan Engineering Commission, to which he appointed three engineers, William C. Edes, of the Southern Pacific Railroad, chairman, Lieut. Frederick Mears of the United States Army and Thomas Riggs, Jr. of the Alaska Boundary Survey Commission. After organizing and equipping a number of railroad-location surveying parties, the members of the commission went to Alaska and made a close examination and survey of the several recommended railroad routes. This work was carried on during the summer and fall of 1914. Detailed estimates and maps were prepared. The information obtained was reported to President Woodrow Wilson, who issued an order in April 1915 which announced his selection of a route commencing at Seward, on Resurrection Bay, and extending northward a distance of 412 miles, more or less, to a point on the Tanana River, where the town of Nenana now is located, with a branch line of 38 miles to the Matanuska coal fields. Subsequently, it was decided to extend the construction of the main line to Fairbanks.

Construction

Construction of the railroad was started at once and carried on continuously until a golden spike, signifying completion, was driven by President Warren G. Harding at North Nenana on July 15, 1923. The main line extends from Seward to Fairbanks, 470.3 miles and includes a railroad, the Alaska Northern, a standard gage line 71 miles long ex-

tending from Seward to Kern Creek, which was purchased. The Tanana Valley Railroad, a narrow gage line about 39 miles long extending from Fairbanks northward through a mining district to Chatanika, also was purchased. Both of these roads were rehabilitated and partly reconstructed under supervision of the Alaskan Engineering Commission. A branch line also was constructed from Matanuska to Chickaloon, 37.9 miles long, and later the following branches leading to bituminous coal mines were built from the branch line: Sutton to Eska and Jonesville, 3.8 miles; and Moose Creek to Premier, 3.8 miles. A branch also was built, leaving the main line at Mile 359.2 and extending 4.4 miles up to Healy River to some of the large beds of sub-bituminous coal. Owing to limited traffic, operation of the narrow gage line, Fairbanks to Chatanika, was discontinued in August 1930; the rails subsequently were removed. This district is served adequately by trucks and passenger cars operating on the Steese Highway. During the summer of 1933, the Matanuska branch track was taken up between Sutton and Chickaloon, 17.9.

As a World War II measure, in order to safeguard the flow of military supplies, equipment, and personnel from tidewater to Anchorage and Fairbanks, a branch called the Whittier Cut-Off was constructed under the supervision of the Engineer Corps of the War Department in 1942–43. This is a part of the main line of the railroad extending from Whittier on Passage Canal, Prince William Sound, to Portage Station. The new line is 12.4 miles long and includes two tunnels through the mountains, one 13,090 feet long and one 4,910 feet. The construction of this cut-off shortened the distance from tidewater to Fairbanks by 51.5 miles and gave the railroad two terminal ports where connections are made with ocean steamships—Seward and Whittier.

Organization

Under authority delegated by the President of the United States, all the Railroad affairs are conducted under supervision of the Secretary of the Interior; a general manager is in immediate charge, with headquarters and general offices at Anchorage, Alaska. In the States, the Railroad is represented by a special representative at Seattle, Washington. The designation "Alaskan Engineering Commission" was abolished and "The Alaska Railroad" substituted by order of the Secretary of the Interior in 1923.

Improvements

In 1947 The Alaska Railroad started a program to rehabilitate its line, equipment, and maintenance shops. Improvements under this program include eliminating dangerous curvatures by making line changes;

replacing expensive wooden bridges with steel structures; replacing of worn 70-pound steel rails with 115-pound steel rails from Mile Post 3, near Seward, to Fairbanks, Mile Post 470; and improving warehouses, shop facilities, freight depots, and other buildings. Line changes and roadbed improvements will make possible shorter train schedules and eliminate considerable maintenance expense.

White Pass and Yukon Route

This railroad was constructed at the turn of the 20th century and is a 111-mile line extending from tidewater at Skagway to Whitehorse in Yukon Territory. It was the first railway to be built in Alaska, although only 20 miles of this line lie in the Territory. It has, however, played an important role in the development of interior Alaska. Prior to construction of The Alaska Railroad, the line, connected by river boat and winter trail, provided a major outlet for the Fairbanks region. Today, its principal function is to serve Skagway, Yukon Territory, and Northern British Columbia, Canada.

THE STREAMLINER "AURORA" OPERATED BY THE ALASKA RAILROAD.

Railroad Mileage in Alaska

The following table lists the mileage of railroads operating in Alaska:

	Miles
The Alaska Railroad, main line and branches, standard gage	539.7
White Pass and Yukon Route—Terminal at Whitehorse, Yukon Territory, Canada (total mileage 111 miles)	20.4

River Transportation Within Alaska

The Alaska Railroad leased its riverboat facilities to a privately owned transportation company in March 1955. That concern operates its own and the leased cargo vessels from Nenana, where transshipment is made from the Railroad, to ports on the Tanana and Yukon Rivers. Below the junction of Tanana, the vessels go as far downstream as Marshall, 858 miles from Nenana. These vessels operate from May until September, supplying miners, missionaries, prospectors, traders, trappers, natives, and fishermen living on the inland waterways.

Service also is maintained by vessels operated by various transportation companies on the Yukon, Koyukuk, Innoko, and Kuskokwim Rivers.

Air Transportation

Due to the vast size, rugged terrain and primitive nature of Alaska, air transportation is the only means of transportation which covers the entire Territory. Pioneering the air routes of Alaska was accomplished in 1920 by the Army when four military planes made a round-trip between New York and Nome. Four years later Lt. Carl Ben Eielson, under contract with the Post Office Department, made the first eight air mail flights to the Territory. Subsequently, regular passenger, freight, and air mail services were established between Alaska and the United States and between certain points in Alaska.

Freight and mail are transported to the coastal towns by various steamship companies, together with connections with the railroad which serves the rail-belt area. Some of these communities are thence served by surface highway transportation, where accessible.

No form of transportation, other than the airplane, serves the entire Territory with established routes which connect all cities, towns, and villages with one another and the States direct. There are small vil-

lages which have a population of only ten or so people which receive regular mail, freight and express service by airplane only.

A modern system of Federal Airways, 7,850 miles long, crisscrosses Alaska and is administered by the Civil Aeronautics Administration. Along these airways are strategically located intermediate landing fields, as well as terminal fields at the larger towns and cities. The airways are marked by a system of low and medium frequency radio ranges, markers and other modern navigation aids.

Alaskans think of their highways not only in terms of the roadways on the land, but of these highways of the sky. Air miles traveled per capita are higher in Alaska than anywhere else in the world.

The airports at Anchorage and Fairbanks are of intercontinental express classification, and were built and are operated by the Civil Aeronautics Administration under special Federal legislation.

Figures for passenger traffic and freight into and out of the Anchorage International Airport reflect both the activity and growth of air transportation:

Passengers In and Out		*Freight In and Out*
1953	97,776	14,482,789 pounds
1954	124,548	17,330,004 pounds
1955	140,660	20,136,829 pounds

The development of a sound system of Territorial small airports is being pursued by the Territorial government. The Federal government, through the Civil Aeronautics Administration, is providing $1,350,000 annually, 1956 through 1959, for further development of air fields.

It is now possible to fly on a regular schedule direct from Anchorage, Alaska, to Seattle, Washington, with Northwest Airlines in the short time of 5 hours. Besides this service, Northwest also has daily tourist service to Seattle. One tourist flight per week is scheduled for Anchorage to Minneapolis via Edmonton. There are at present regularly scheduled flights to and from the Orient stopping in Anchorage.

Pacific Northern Airlines has 3 daily round trips between Anchorage and Seattle, Washington. Two of these using Constellations and one via Cordova, Juneau and Ketchikan uses a DC–4 on the Juneau to Anchorage leg of the route. The inter-Alaska service of Pacific Northern Airlines includes 2 daily trips to Kodiak via Kenai and Homer, and a daily trip to King Salmon (Naknek) via Illiamma.

Pan American World Airways provides regularly scheduled service from Seattle direct to various Alaskan cities, and also has flights from Seattle to Fairbanks via Ketchikan, Juneau and Whitehorse. In addition, Pan American has cargo and mail flights from Seattle to Fairbanks and Nome, Alaska.

Alaska Airlines services Fairbanks daily except Sunday and Monday from Seattle. This airline also has 2 flights daily from Anchorage to Fairbanks and return. Daily flights are made from Anchorage to Nome via McGrath and Unalakleet. Connecting bushliners serve some 70 other communities on Alaska Airlines' routes.

Reeve Aleutian Airways has a bi-weekly schedule to the Aleutian Island "Chain," departing from Anchorage and flying as far west as Attu, in probably the most difficult and changeable weather conditions found on this earth. There is also a weekly flight from Anchorage to the Pribilof Islands, the center of the fur seal areas, via the Aleutians.

Cordova Air Service has a daily schedule with Anchorage, starting from Cordova to Valdez and thence to Anchorage, also connecting eastward from Cordova to the Copper River points and south to Yakutat. Cordova Airlines also has a morning and afternoon flight schedule con-

TERMINAL BUILDING AT THE ANCHORAGE INTERNATIONAL AIRPORT OPERATED BY THE CIVIL AERONAUTICS ADMINISTRATION.

necting the community of Seward and Anchorage. This is a 30-minute flight and is patronized in a bus-like fashion.

Wien-Alaska Airlines, operating from Fairbanks, has a daily flight to Kotzebue, the largest community in the Arctic, and continuing on to Nome, via the Diomede Islands, and returning to Fairbanks. Also daily flights are made to Fort Yukon, Circle Hot Springs and other upper Yukon River points, together with a daily schedule to Point Barrow, then thrice weekly down the Arctic Coast to all the Eskimo villages on the western Arctic Coast.

Northern Consolidated Airlines serves all of the Southwestern section of Alaska from Anchorage daily. DC-3 aircraft fly to Bethel via McGrath, Flat, Aniak, and Platinum. Northern Consolidated, with its fleet of bush aircraft, services every community on the lower Kuskokwin and travels as far as Nunivak Island.

Scandinavian Airlines are flying from Denmark, Sweden, and Norway, via the North Pole and Alaska, saving many valuable hours by flying to the Orient over this new short route.

Probably the most unique airlines operation is that of two airlines of Southeastern Alaska, namely, Alaska Coastal Airlines and Ellis Airlines. This combined operation is the largest seaplane activity in the world. In 1955 these two airlines carried over 80,000 revenue passengers, together with a high volume of freight and mail, serving Juneau, the capital of Alaska. Ketchikan, Petersburg, Skagway, Wrangell, noted for its gold rush fame, and Sitka are also served by this airline operation. The latter is famous as the Russian capital before the purchase of the Territory by the United States, and also as the site of Sitka National Monument. Alaska Coastal Airlines also serves Gustavus Airport in Glacier Bay National Monument.

There are approximately 650 aircraft in Alaska, of which nearly 200 are seaplanes. One-fourth of the seaplanes in the world are in Alaska and 20 percent of this total are based at Lake Hood, in the Anchorage area. There are about 1,400 airplane pilots in Alaska, 270 airports and airfields and 30 seaplane facilities. During the year 1955, the total Alaskan passengers enplaned were 264,682. The aviation industry, together with its associated activities is the largest year-round employer of manpower in the Territory of Alaska.

Besides the larger air carrier operation, Alaska has an air transportation setup by that group of stalwart and dependable pilots—the Bush Pilots, operating to the more remote locations that the mainline carriers do not reach. These bush, or pilot-owner, operators are the backbone of the economy of the smaller towns and villages of this frontier land as the weather, terrain and distance give this method of travel a definite advantage over surface transportation.

Airline schedules and service are subject to change. Current infor-

mation may be obtained by writing to or visiting the local offices of the airlines referred to in the preceding paragraphs.

Steamship Transportation

The Alaska Steamship Company, in the fall of 1954, discontinued passenger service to Alaska and established a program to provide improved freight service to the major ports and areas of Alaska.

To replace the regular scheduled service which had traditionally been offered by passenger vessels, all freighter service was put on a scheduled basis. Service at regular intervals has been given both the southeastern and southwestern areas. Vessels are scheduled to other areas in accordance with seasonal activity and traffic requirements. The Company's container program, commonly referred to as "unitized" service, has been successful in reducing loss and damage to cargo, as well as in the elimination of delays formerly due to piece checking and handling. Detailed information concerning rates and schedules may be obtained by writing to the Alaska Steamship Company, Pier 42, Seattle, Washington.

The Canadian Pacific and Canadian National Steamship Companies jointly operate passenger vessels from Vancouver, British Columbia, to southeastern Alaska ports. Specific information may be obtained by writing either of the two companies at Vanconver, B. C.

Alaska Barge Lines provides barge service between Seattle and the Railbelt area of Alaska. Foss Tug and Barge Lines provides contract service between Pacific Northwest ports and Alaska.

The Coastwise Lines, 150 Sansome Street, San Francisco, California, carries freight from West Coast ports to Alaska.

Veterans' Rights

THE KOREAN GI BILL (Public Law 550) applies to Alaska just as it does to any other part of the United States. It is not necessary to be an established resident of Alaska in order to obtain the benefits of the GI bill of rights within Alaska. Alaska's regional office of the Veterans' Administration is the Goldstein Building, Juneau, Alaska. The Juneau regional office maintains offices, where detailed information regarding the benefits available to veterans may be obtained from contact representatives, in Ketchikan, Anchorage, and Fairbanks in addition to the regional office in Juneau.

A special session of the Territorial Legislature was called early in 1946 for the purpose of enacting Territorial veterans legislation. Under the Act veterans who were residents of Alaska at the time of their induction in the Service are entitled to claim a bonus of $10.00 for every month of service or, in the alternative, may borrow up to $10,000 at 4% for business or home purposes, and up to $2,500 for educational purposes.

Education

Under the GI bill of rights, eligible veterans may apply for admission directly to the University of Alaska at College, Alaska, or to any GI approved school or institution. The applicant must submit a photostatic or certified copy of his discharge and obtain a certificate of eligibility. Application may also be made through any Veterans' Administration contact representative, or directly to the regional office, Juneau, Alaska.

Loans to Veterans

GI Loans: Loans guaranteed or insured by the Veterans' Administration for the purchase or construction of homes, farms or business

property may be made anywhere in the Territory where people normally go to secure loans, i. e., any bank or other private lending agency which participates in the GI loan program and will make such a loan at an interest rate not higher than 4½ percent. A private lending agency willing to make a GI loan will communicate with the Veterans' Administration regional office in Seattle, Washington, about the necessary details of the loan.

Note—As of May 3, 1957, the application deadline for GI insured or guaranteed loans, based on World War II eligibility, was July 25, 1958. GI loans based on Korean conflict eligibility must be made by January 31, 1965.

Direct Loans: If an eligible veteran cannot find a private lending agency in Alaska that will make him a GI loan, the Veterans' Administration may be authorized to advance him a direct Government loan, not to exceed $10,000, for the purchase, construction, repair or improvement of a home or farmhouse. Direct loans for business purposes are *not* authorized. For information about direct VA loans, the veteran should write to the Veterans' Administration Regional Office, Tower Building, 7th Avenue and Olive Way, Seattle 1, Washington.

Note—As of May 3, 1957, VA's authority to extend direct loans to veterans was scheduled to expire on June 30, 1958.

Hospitalization and Medical Care

Veterans may receive out-patient treatment from private physicians in Alaska working on fee basis with the Veterans' Administration for disabilities resulting from their military service or for any necessary treatment if under training, according to Public Law 16. These participating doctors also give medical examinations for rating purposes and examinations to determine the need for hospitalization. The veteran may be treated in any Alaska Native Service hospital or any private hospital in Alaska upon authorization of the Juneau regional office. Hospitalization is available to qualified veterans in all sections of Alaska when properly authorized by the Veterans' Administration. If no emergency exists and necessary treatment is not available locally, a veteran may be sent to the United States and hospitalized in the Veterans' Administration hospitals upon proper authorization by the regional office, Juneau, Alaska.

Homestead, Homesite and Small Tract Rights

Preference is accorded honorably discharged veterans of World War II and the Korean conflict in connection with filings under the homestead, homesite, and small tract laws of the United States. Where surveyed lands are newly opened to filings or restored to entry under

the public land laws, such veterans are granted a preference right of application under the homestead, homesite, or small tract laws for a period of 90 days before the lands become subject to application by the public generally. Where unsurveyed lands are restored from withdrawal status, such veterans will be granted a preference right of settlement for a period of 90 days before the lands become subject to settlement by the general public.

Persons entitled to veterans' preference for such public land filings in brief are: (a) Honorably discharged veterans who served at least 90 days after September 15, 1940; (b) surviving spouse or minor orphan children of such veterans; and (c) with the consent of the veteran, the spouse of living veterans. Veterans who were discharged on account of wounds or disability incurred in the line of duty, or the surviving spouse or minor children of veterans killed in the line of duty are eligible for veterans' preference regardless of the fact such serviceman may have served less than 90 days after September 15, 1940.

Veterans of World War I and other wars also enjoy benefits under the public land laws. Generally, all honorably discharged veterans of 90 days' service may apply service time in the armed forces, up to a maximum of two years, toward the required residence on homesteads and homesites. The principal advantage that veterans have in this over other citizens, is that the three years actual residence required under the homestead and homesite laws, can be reduced by crediting service time, and thus effectively move up the date of title issuance, providing other requirements are satisfactorily met.

Additional Information

Veterans may write the Regional Office, Veterans Administration, Box 2629, Juneau, Alaska, for more information on benefits administered by the Veterans Administration.

For further information on homesteading, write the Alaska Operations Supervisor, Bureau of Land Management, Box 480, Anchorage, Alaska.

Miscellaneous

Special Events and Celebrations

(IN ADDITION TO LEGAL HOLIDAYS)

Anchorage Fur Rendezvous

The annual Anchorage Fur Rendezvous is a seven-day holiday held during the latter part of February. A rendezvous queen is chosen, and her coronation is followed by a fireworks display and a Mardi Gras ball. Other events include a parade of industry, ice skating, skiing, dog races, basketball and hockey games, and boxing.

Fairbanks Winter Carnival

The Fairbanks Winter Carnival is a week-long celebration held annually early in March. Major events include a parade, queen contest, fireworks, hockey matches, ski races, dog racing, curling, and bowling.

Juneau Salmon Derby

The annual Territorial Sportsmen's Association salmon derby is staged in Juneau, usually in July. Fishermen compete for a host of prizes by fishing in the bays and inlets for king and coho salmon.

Ketchikan King Salmon Derby

Sport fishing for the mighty "King" salmon is found in all waters adjacent to Ketchikan making it the natural location for one of the greatest of all fishing events, the Ketchikan Alaska Salmon Derby,

which is held annually. The Derby is divided into two phases: (1) The seasonal derby for which there is a grand prize, as well as weekly prizes, and runs from March 1st to August 31st. (2) The special two-day derby during the first week-end in June for which valuable prizes are given.

Matanuska Valley Fair

Residents of the rail belt area take part in the annual Matanuska Valley Colony Day, which is held in the spring. Farmers compete for prizes with their farm products and floral displays.

Tanana Valley Fair

The Tanana Valley Fair Corporation stages its annual Tanana Valley Fair at Fairbanks in late August. Residents of the valley enter agricultural exhibits, handicraft, and needlework in the festival.

Northwestern Alaska Fair

The Northwestern Alaska Fair Association stages an annual fair at Nome, usually during August. Honors are awarded for native products, including ivory work, jewelry, footwear, fur clothing, and baskets.

Western Alaska Fair

Anchorage's annual summer fiesta is a three-day run of frolic, fun, and fireworks, usually in August. Major events include fireworks display, a flower show, softball games, and a bait-casting competition.

Midnight Sun Baseball Game

In the Fairbanks area during midsummer the startling sunsets do not occur until after ten or eleven o'clock at night, and from then until the early dawn a phosphorescent twilight prevails. At Fairbanks a midnight baseball game is played every June 21.

Alaska Day

October 18 is celebrated as Alaska Day, the anniversary of the actual transfer of ownership of Alaska from the Russian Empire to the United States of America.

Flag

Alaska's flag was selected from designs submitted in a flag contest held in 1927 in the public, private, and native schools of the Territory by the American Legion, Department of Alaska. It was designed by Benny Benson, aged 13, a student in the seventh grade of the Mission Territorial School near Seward, Alaska, and adopted as the official flag by the Territorial Legislature on May 2, 1927.

The design is eight gold stars in a field of blue. The blue, one of our national colors, typifies the evening sky, the sea and mountain lakes, and wild flowers that grow in Alaskan soil; the gold is significant of the wealth that lies hidden in Alaska's hills and streams. Seven of the stars simulate the constellation Ursa Major, the Great Bear. This is the most conspicuous constellation in the northern sky and forms the Dipper. The Pointers point toward the eighth star in the flag, Polaris, or the North Star, the even-constant guide for the mariner, explorer, hunter, trapper, prospector, woodsman, and surveyor. The following poem about the flag was written by Marie Drake:

ALASKA'S FLAG

Eight stars of gold on a field of blue—
Alaska's flag. May it mean to you
The blue of the sea, the evening sky,
The mountain lakes, and the flow'rs nearby;
The gold of the early sourdough's dreams,
The previous gold of the hills and streams;
The brilliant stars in the northern sky,
The "Bear"—the "Dipper"—and, shining high,
The great North Star with its steady light,
Over land and sea a beacon bright.
Alaska's flag—to Alaskans dear,
The simple flag of a last frontier.

—Marie Drake

Flower

The forget-me-not is Alaska's floral emblem.

Song

Alaska, My Alaska, composed by Mountin A. Snow of the class of 1903 of the Juneau High School, has been adopted by the Pioneers of Alaska as their official song. It is sung to the tune of Maryland, My Maryland.

ALASKA, MY ALASKA

O, land of gold, I sing of thee
Alaska, my Alaska.
Thy snow-capped peaks I love to see
Alaska, my Alaska.
From Arctic Ocean's frozen shore
To Baranof of Russian lore
Thy mighty rivers I adore
Alaska, my Alaska.

In '67 by Seward's might
Alaska, my Alaska.
Thy inmost wealth was brought to light
Alaska, my Alaska.
Tho' slow thy growth through many a year
Thy motto has been "Persevere,"
Thy fame is sung both far and near
Alaska, my Alaska.

O, may thy future shine most clear
Alaska, my Alaska.
And in the hearts of men grow dear
Alaska, my Alaska.
Henceforth, O, land of ice and snow,
The wealth from out thy hills shall flow
And cast o'er all a radiant glow
Alaska, my Alaska.

Official Bird

Ptarmigan.

U. S. GOVERNMENT PRINTING OFFICE : 1957 O-F—428995